

MASTER THESIS

# The late effects of breast cancer treatment up to five years and associated primary care use



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Eline Beldhuis, August 2018

## Summary

**Introduction:** Breast cancer has the highest prevalence of all types of cancer. With increase in incidence and survival, more women live with the consequences of their breast cancer treatment. Currently, there is no complete overview of all the possible late effects. The goal of this research is to gain insight in patient-reported late effects of breast cancer patients up to five years after treatment and associated use of primary care.

**Materials and methods:** Among 876 female breast cancer patients who were diagnosed between 2012 and 2016 in the Netherlands (age>18), a 17-item questionnaire was distributed. The outcome measures were physical and psychosocial complaints and associated primary care use.

**Results:** Out of all the requested patients, 408 (41%) responded. Out of all reported complaints, tiredness (65%), memory/concentration problems (44%) and menopause complaints (40%) had the highest prevalence. Bone fractures, stomach complaints (58%), skin problems and chest pain (both 50%) had the highest extent associated use of primary care. Chemotherapy was the most common cause for complaints and affected sensitivity complaints the most (OR 2.53, CI: 1.68-3.83). The presence of comorbidities affected the use of primary care the most.

**Conclusion:** Patients experienced many complaints but did not often use associated primary care. Different variables had different effects on having a complaint or using associated primary care. These effects could be used for giving information to patients about their treatment in the early stadium of their treatment trajectory.

## Table of contents

Acknowledgements .....	2
Summary .....	3
1. Introduction .....	5
2. Materials and methods .....	6
2.1 Study population .....	6
2.2 Questionnaire.....	6
2.3 Analysis.....	7
3. Results.....	8
3.1 Respondents.....	8
3.2 Conditions of patients .....	9
3.3 Late effects and associated primary care use.....	13
3.4 Logistic regression .....	15
3.4.1 Influencing factors on the occurrence of late effects	15
3.4.2 Influencing variables of primary care use for a complaint	16
4. Discussion.....	19
4.1 Strengths and limitations .....	19
5. Conclusion.....	20
5.1 Disclosures.....	20
5.2 Ethical approval .....	20
References .....	21
Appendix .....	22
Appendix I: Overview with numbers of reported complaints and associated primary care use .....	22
Appendix II: Late effects differentiated in groups and visiting a physician for it .....	23
Appendix III: Logistic regression .....	24
Influencing factors on the occurrence of late effects	24
Logistic regression: influence variables on visiting a physician .....	29
Appendix IIII: Questionnaire.....	37

## 1. Introduction

Breast cancer has the highest prevalence of all types of cancer in the Netherlands, affecting 215.000 patients in 2016. There are reductions in morbidity and mortality among cancer patients (1, 2) (3) due to an increase in survival due to early detection and improvements in the treatment of breast cancer (3) (4). However, the prevalence has been increasing with an average of 2.8% per year, because of population growth and ageing. The five year survival of breast cancer stage I,II,III is respectively 98%, 92% and 76%, but for stage IV this is only 29% (5, 6). Since patients are getting older, also the chance on being vulnerable for and experiencing of co-morbidities rises (1).

Treatment for breast cancer generally consists of surgery next to chemotherapy, radiotherapy, hormonal or targeted therapy (1). This depends on many factors and characteristics of disease, for example presence of metastases (7). Every treatment modality can induce side or late effects that can have an impact on the general health and quality of life of a patient, differing within the context of the patient and the type of treatment. Different kinds of therapies lead to different kinds of side effects (1), for instance chemotherapy increasing the risk of experiencing fatigue (8). Breast cancer patients partly experience similar late effects and side-effects as cancer patients in general. Some effects are breast cancer specific, such as impairments from the arm/axilla caused by surgery in the axilla, psychosocial effects caused by mastectomy (9, 10) and tingling, tightness or numbness in the chest after having a surgery (2). Currently, there is no complete overview of all the possible side-effects and late effects of breast cancer treatment. A first possible cause for this is that some treatments were developed relatively recently, so not all late effects were known (late effect: health problem that months or years after a diagnose or end of treatment occurs (11)). Second, not all late effects are recognized by health care professionals or patients as being related to the breast cancer treatment. A third reason could be that some women withhold their concerns about their impairments, in order not to ‘bother’ people within their surroundings (9). Fourth, it is known that not all patients visit their physician for all their late effects and side-effects caused by their cancer treatment, because they think that the effects are standard for the treatment (9).

The goal of this research was to gain insight in the late effects of breast cancer patients up to five years after treatment and whether these patients visit a physician for these effects. Therefore three study questions were posed:

- What are the late psychosocial and physical effects that patients experience in the years after their breast cancer treatment based on the questionnaire?
- To what degree do patients visit a (general) physician for the experienced effects caused by breast cancer treatment?

- Which factors influence the occurrence of late effects of breast cancer treatment and which factors influence visiting a general physician for these complaints?

## 2. Materials and methods

### 2.1 Study population

Patients were selected from the Netherlands Cancer Registry (NCR). The NCR provides a dataset about diagnosis and treatment of all cases of cancer in the Netherlands. The Netherlands Comprehensive Cancer Organisation (IKNL) manages this database (12).

Sixty-nine hospitals were asked to invite patients to participate in a questionnaire, twenty hospitals cooperated. Patients were randomly selected per hospital. It was aimed to get an equal distribution in hospital type (general, teaching, academic) and geographical scatter. Patients were included when they were diagnosed and surgically treated (aged 18 or older) between 2012 and 2016 for primary invasive breast cancer as their first and only malignancy. Patients younger than 18 and with previous malignancies and/or metastases were excluded.

In total 880 patients were invited to participate, with an average of 50 patients per hospital. The patients were asked to complete an online questionnaire. They were invited by a letter send by their treating physician between 20-09-2017 and 28-02-2018. The questionnaire was managed within PROFILES, an online application for questionnaires. PROFILES was developed by researchers of The Netherlands Comprehensive Cancer Organisation and the Tilburg University and medical specialists. Their goal is to gather more information about the effects of living with cancer or living after having cancer. The results contribute to better (after)care (13). Until May 1st, 2018, the completed questionnaires were collected. If requested by the patient, a paper questionnaire was provided. Respondents gave consent for processing their answers and merging them to their clinical data available in the NCR on an adjective informed consent form.

Approval from the Committee of Privacy of the NCR and the Committee of Privacy of the Netherlands Institute for health services research (NIVEL) were obtained for this study. The Twente Medical Ethical Committee did not consider it as Medical Research Involving Human Subjects Act (WMO) mandatory.

### 2.2 Questionnaire

For this research, a questionnaire was developed. It was a seventeen-item questionnaire (Appendix III), which consisted of questions about experienced health (SF-36 module on general health), specific questions about physical and psychosocial complaints, quality of life (EORTC-QLQ-C30) and questions about personalia. The SF-36 and EORTC-QLQ-C30 are both validated questionnaires (14, 15).

The SF-36 were questions about general health, the EORTC-QLQ-C30 about physical complaints and quality of life, the other questions are general questions about the respondent, such as level of education, living and working status and having children. Through the Dutch BC (Borstkankervereniging Nederland) a patient panel was contacted, who critically reviewed the questionnaire, with exception of the sf-36 and EORTC-QLQ-C30 (already validated).

### 2.3 Analysis

The completed questionnaires were merged with the patient information and clinical data in the NCR. By comparing characteristics of respondents to non-respondents, generalizability was determined (Pearson's chi-square, level of significance <0.05).

First, patient, tumor, treatment and hospital characteristics were reported per year of incidence (2012-2016). Second, quality of life and present comorbidities were summarized. This was done by making tables and categories. Third, the percentages for reported complaints and for visiting a physician were calculated. Fourth, ten different groups of health complaints were formed. The complaints were experienced in the past year, from the moment of participating in the questionnaire (these groups were used for the percentages of reported complaints and associated primary care use and can be found in Appendix II).

*Table 1: Groups of health complaints*

Group	Complaints
<b>Psychosocial: Tiredness</b>	Tiredness
<b>Psychosocial: Other</b>	Anxious, depressed, stressed, being irritable, memory/concentration problems, increased drug/drunk use, headache, dizziness, sleep problems
<b>Digestive system</b>	Abdomen/stomach complaints, nausea, diarrhea
<b>Sense organs</b>	Eye complaints, ear complaints, nose complaints, skin complaints, hypersensitivity light/sound, dry mouth
<b>Heart</b>	Palpitations, chest pain
<b>Physical: Body parts</b>	Neck/shoulder complaints, back complaints, arm/elbow/hand/wrist complaints, leg/hip/knee/foot complaints
<b>Physical: Sensitivity complaints/restrictions</b>	Muscle strain, tingling fingers/feet/toes
<b>Respiratory system</b>	Short of breath at rest, coughing
<b>Female reproductive system and hormones</b>	Sexuality problems, menopause complaints, weight changing, early menopause complaints, hear loss, urination problems
<b>Breast area complaints</b>	Pain/swelling affected breast area, hypersensitivity affected breast area, skin problems affected breast area, axilla complaints, restriction of arm movement

Last, based on these groups, multivariate regressions were performed to determine the factors that affected reporting a complaint and associated primary care use. With a univariate logistic regression, the variables for the multivariate regression were determined. For this, a relaxed level of significance ( $p<0.10$ ) was applicable. For the univariate regression on reporting a complaint, the following variables

were included: having a partner, hormone therapy, radiotherapy, chemotherapy, target therapy, age, having children, education, hospital type, the number of comorbidities and most important operation. For the multivariate regression on associated primary care use, the same variables were used, but also the variables ‘type of work’ and ‘cancer stage’ were included. For the multivariate regression, a p-value of  $<0.05$  was defined as statistical significant. All analyses were performed using STATA version 14 software (16).

### 3. Results

#### 3.1 Respondents

There was a respondent rate of 41% (408 respondents out of 880). Between the non-responders and responders group was no significant difference in year of diagnosis, type of surgery, clinical stage and type of hospital, but there was a significant difference in age. The group younger than 50 years old (17%) and the group of older than 70 (25%) were less represented in the responders group than in the non-responders group (Table 1).

Five respondents were excluded from the data, because of the lack of answers on the questionnaire, not surgically treated or not linked on the NCR data.

Table 2: Responders vs. Non-responders

		Responders		Non-responders		P <sup>a</sup>
		N = 408	%	N = 592	%	
<b>Age</b>	<50	82	20%	147	25%	0.010
	50-59	127	31%	157	27%	
	60-69	128	31%	150	25%	
	70+	71	17%	138	23%	
<b>Year of diagnosis</b>	2012	55	13%	116	20%	0.120
	2013	93	23%	115	19%	
	2014	86	21%	116	20%	
	2015	89	22%	118	20%	
	2016	85	21%	127	21%	
<b>Type of surgery*</b>	Breast conserving	162	40%	223	38%	0.769
	Amputation	240	59%	360	61%	
<b>Stage</b>	1A	175	43%	265	45%	0.205
	1B	13	3%	24	4%	
	2A	112	27%	173	29%	
	2B	64	16%	59	10%	
	3A	24	6%	41	7%	
	3B	9	2%	10	2%	
	3C	11	3%	20	3%	
<b>Type of hospital<sup>b</sup></b>	General hospital	178	44%	274	46%	0.277
	Teaching (top clinical) hospital	221	54%	297	50%	
	Academic hospital	9	2%	21	4%	

**a Chi-square tested.**  
**b Hospitals were categorised as either general, teaching, or academic hospitals.**  
\*do not add up due to missing values

### 3.2 Conditions of patients

Patient, tumor, treatment and hospital characteristics per year of incidence were determined (Table 2)..

Focusing on the total table, most of the patients were post-menopausal ( $\pm 68\%$ ,  $p=0.035$ ) and had children living away ( $\pm 59\%$ ,  $p=0.038$ ). Also, most of the patients had breast cancer stage I or II (46% and 43%,  $p=0.002$ ) and underwent breast conserving surgery (58%  $p=0.015$ ).

Also, patient conditions, like quality of life, for each year of incidence were determined (Table 3, completely patient reported). Quality of life was high: more than 46% had a rating above 75 out of 100. Most patients had no comorbidity (when diagnosed) (56%,  $p=0.087$ ). The most preventive comorbidity was disorders of muscles, connective tissue and/or joints was the most preventive comorbidity.

Table 3: Patient's characteristics per year of incidence

	2012 N (total 54)	%	2013 N (total 92)	%	2014 N (total 86)	%	2015 N (total 89)	%	2016 N (total 83)	%	P
<b><u>Patient characteristics</u></b>											
<b>Age</b>											
<50	8	15%	20	22%	23	27%	12	13%	15	18%	0.472
50-59	19	35%	25	27%	24	28%	33	37%	25	30%	
60-69	13	24%	31	34%	28	33%	30	34%	25	30%	
70+	14	26%	16	17%	11	13%	14	16%	18	22%	
<b>Menopause</b>											
Premenopausal	7	13%	20	22%	18	21%	11	12%	15	18%	0.035
Perimenopause	1	2%	7	8%	9	10%	1	1%	4	5%	
Post menopause	36	67%	61	66%	52	60%	69	78%	56	67%	
Unknown	10	19%	4	4%	7	8%	8	9%	8	10%	
<b>Education *,**</b>											
Secondary school or lower	17	31%	39	42%	21	24%	21	24%	21	25%	0.201
Intermediate vocational training	25	46%	31	34%	40	47%	36	40%	38	46%	
Higher vocational training and university	12	22%	20	22%	25	29%	27	30%	24	29%	
<b>Partner*,**</b>											
Yes	48	89%	72	78%	75	87%	68	76%	70	84%	0.335
No	6	11%	18	20%	11	13%	19	21%	13	16%	
<b>Children *,**</b>											
Yes, living at home	15	28%	20	22%	30	35%	16	18%	25	30%	0.038
Yes, away living	35	65%	54	59%	47	55%	50	56%	48	58%	
No	4	7%	17	18%	8	9%	21	24%	10	12%	
<b>Workstatus *,**</b>											
Employed or school-going	15	28%	35	38%	36	42%	32	36%	41	49%	0.166
Unemployed	1	2%	2	2%	5	6%	5	6%	2	2%	
Incapacitated	0	19%	6	7%	5	6%	2	2%	5	6%	
Housewife	10		9	10%	9	10%	13	15%	5	6%	
Retirement	25	46%	39	42%	27	31%	32	36%	28	34%	
<b>Tumor characteristics</b>											
<b>Stage (pTNM completed with cTNM)</b>											
1	26	48%	52	57%	35	41%	42	47%	31	37%	0.025
2	18	33%	30	33%	47	55%	37	42%	42	51%	
3	10	19%	10	11%	4	5%	10	11%	10	12%	
<b>Lymph nodes positive</b>											
Yes	2	4%	5	5%	5	6%	11	12%	16	16%	0.002

No	31	57%	63	68%	63	73%	56	63%	41	41%	
<b>Treatment characteristics</b>											
<b>Type most important operation</b>											
Breast conserving	27	50%	55	60%	56	65%	51	57%	49	59%	0.015
Amputation	27	50%	37	40%	30	35%	37	42%	29	35%	
Unknown	0	0%	0	0%	0	0%	1	1%	5	6%	
<b>Chemo therapy</b>											
Yes	21	39%	44	48%	49	57%	48	54%	34	41%	0.115
No	33	61%	48	52%	37	43%	41	46%	49	59%	
<b>Hormone therapy</b>											
Yes	27	50%	52	57%	53	62%	54	61%	46	55%	0.664
No	27	50%	40	43%	33	38%	35	39%	37	45%	
<b>Radio therapy</b>											
Yes	37	69%	67	73%	64	74%	63	71%	60	72%	0.954
No	17	31%	25	27%	22	26%	26	29%	23	28%	
<b>Target therapy</b>											
Yes	6	11%	9	10%	8	9%	13	15%	14	17%	0.501
No	48	89%	83	90%	78	91%	76	85%	69	83%	
<b>Hospital characteristics</b>											
<b>Type</b>											
General	19	35%	33	36%	34	40%	45	51%	35	42%	0.118
Teaching	35	65%	54	59%	52	60%	42	47%	46	55%	
Academic	0	0%	5	5%	0	0%	2	2%	2	2%	

\*Patient reported

\*\* Missing values

Table 4: Patient conditions (Quality of life and comorbidities) per year of incidence (on the moment of participating)

	2012 N (total 54)	%	2013 N (total 92)	%	2014 N (total 86)	%	2015 N (total 89)	%	2016 N (total 83)	%	P
<b>Quality of life *</b>											
<26	1	2%	1	1%	1	1%	0	0%	1	1%	0.283
26-50	9	17%	8	9%	11	13%	12	13%	6	7%	
51-75	19	35%	22	24%	34	40%	26	29%	33	40%	
>75	25	46%	61	66%	40	47%	51	57%	43	52%	
<b>Comorbidities</b>											
<b>Comorbidity * , **</b>											
Yes	35	69%	51	61%	37	46%	44	52%	44	56%	0.087
No	16	31%	33	39%	44	54%	41	48%	35	44%	
<b>Other form of cancer metastases * , **</b>											
No	50	98%	83	99%	79	98%	84	99%	77	97%	0.939
Yes	1	2%	1	1%	2	2%	1	1%	2	3%	

Lung disease * ,**										
No	48	94%	70	83%	73	90%	77	91%	74	94%
Yes	3	6%	14	17%	8	10%	8	9%	5	6%
<b>Cardiovascular diseases * ,**</b>										
No	48	94%	79	94%	79	96%	77	91%	71	90%
Yes	3	6%	5	6%	3	4%	8	9%	8	10%
<b>Stomach or intestines complaints * ,**</b>										
No	47	92%	75	89%	79	98%	75	88%	73	92%
Yes	4	8%	9	11%	2	2%	10	12%	6	8%
<b>Reproductive organ/urinary tract complaints * ,**</b>										
No	46	90%	77	92%	74	91%	81	95%	75	95%
Yes	5	10%	7	8%	7	9%	4	5%	4	5%
<b>Muscles, connective tissue and/or joints * ,**</b>										
No	28	55%	58	68%	56	69%	59	69%	56	71%
Yes	23	45%	27	32%	25	31%	26	31%	23	29%
<b>Nerve system * ,**</b>										
No	49	96%	83	99%	81	100%	82	96%	77	97%
Yes	2	4%	1	1%	0	0%	3	4%	2	3%
<b>Metabolism or coagulation disorder * ,**</b>										
No	47	92%	82	98%	75	93%	80	94%	73	92%
Yes	4	8%	2	2%	6	7%	5	6%	6	8%
<b>Infectious disease * ,**</b>										
No	51	100%	82	98%	81	100%	85	100%	79	100%
Yes	0	0%	2	2%	0	0%	0	0%	0	0%
<b># Comorbidities at the same time * ,**</b>										
0	20	39%	39	46%	47	58%	43	51%	39	49%
1	22	43%	31	37%	20	25%	26	31%	32	41%
2	5	10%	10	12%	10	12%	10	12%	5	6%
3	4	8%	4	5%	4	5%	6	7%	3	4%

\*Patient reported

\*\* Missing values

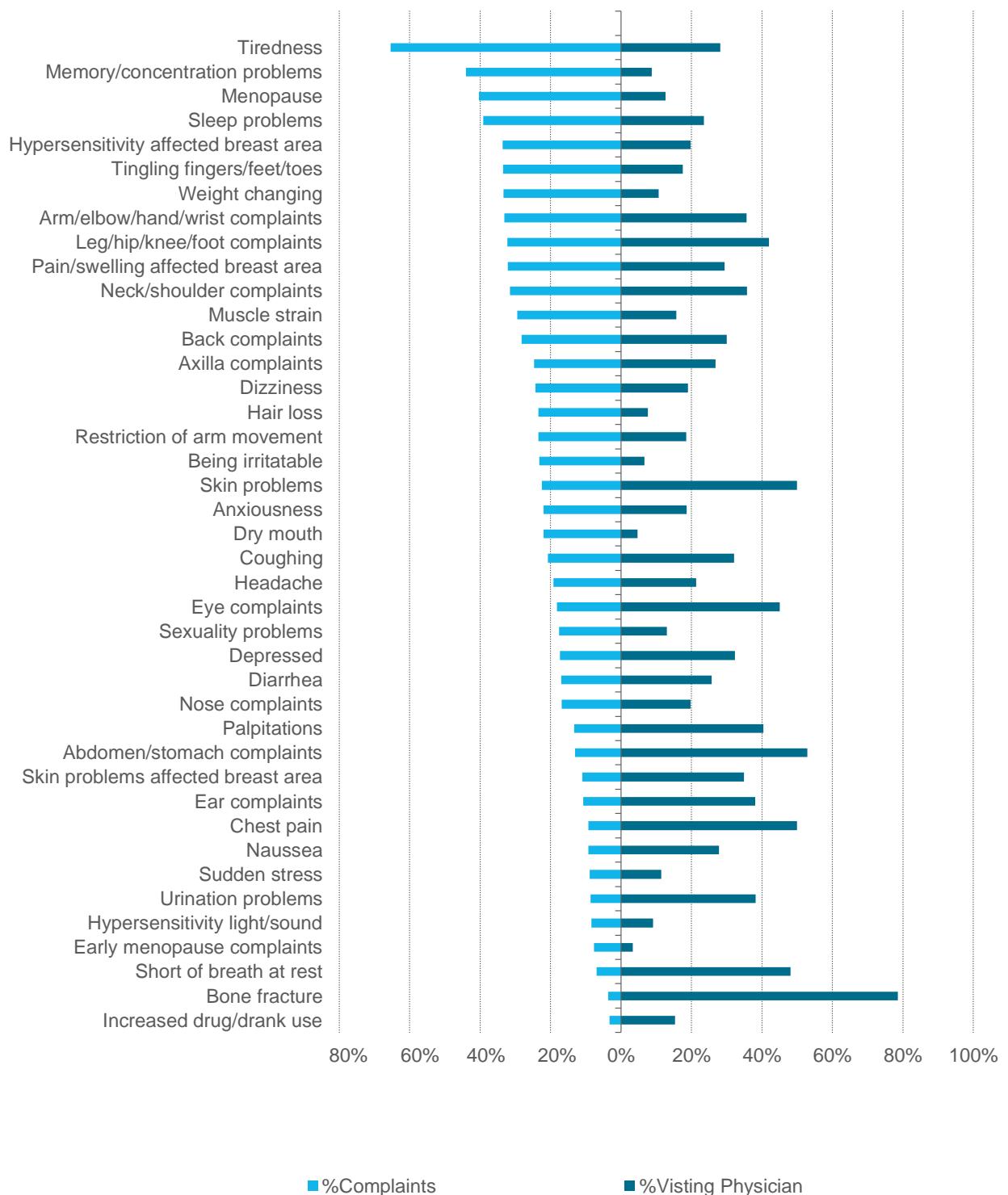
### **3.3 Late effects and associated primary care use**

The percentage of reporting late effects and associated primary care use were calculated (Figure 1). The figure shows the percentages, in order of highest to lowest percentage of reporting a complaint. Of all the reported complaints, tiredness has the highest prevalence (65%), followed by memory/concentration problems (44%) and menopause complaints (40%). There were almost none complaints about increase in drank or drugs abuse (3%) or about bone fractures (4%).

Bone fractures had the highest percentage primary care use (85%), followed by stomach complaints (53%), skin problems and chest pain (both 50%). For early menopause problems, almost none of the patients did visit a physician (3%).

There is a complete overview with numbers in Appendix I.

Figure 1: Percentages of having a complaint and associated primary care use



### 3.4 Logistic regression

The complete table with outcomes of the univariate and multivariate logistic regression can be found in the appendix (Appendix III).

#### 3.4.1 Influencing factors on the occurrence of late effects

On average, three variables of the univariate regression were taken into the multivariate regression (Table 4). Chemotherapy is the most common variable. This variable indicates a higher risk of having a complaint for the following groups: tiredness, other, sense organs, sensitivity complaints and female reproductive system. It affected sensitivity complaints the most (OR 2.53, CI: 1.68-3.83). Age is the second most common variable. It indicated a higher risk for heart complaints (OR 2.41, CI: 1.21-4.81) for the age of 50 or lower. For female reproductive systems and hormones, age also indicates a higher risk for the age of 50 or lower (OR 2.97, CI: 1.28-6.85) and between 50 and 60 years old (OR 2.04, CI: 1.11-3.74). For respiratory system it indicated a protective effect for the age of 50 or lower (OR 0.52, CI: 0.26-1.05) and between 50 and 60 years (OR 0.54, CI: 0.29-1.01). Having one or more comorbidities positively affected the complaints tiredness and sense organs. The more comorbidities, the higher the risk. Radiotherapy had a positive effect on having complaints in the breast area (OR 2.13, CI: 1.09-4.20) and having an amputation on complaints on body parts (OR 1.54, CI: 0.99-2.39) (this variable has a borderline significance ( $P=0.053$ )).

None of the variables had a significant influence on digestive system.

*Table 5: Effect of having a complaint*

Complaints		N	Univariable		Multivariable		P		
			OR	95% CI	OR	95% CI			
<b>Psychosocial</b>									
<b>Tiredness</b>									
Chemotherapy	No	113	Ref		Ref				
	Yes	143	2.29	1.49-3.53	2.16	1.29-3.64	0.003		
#Comorbidities	0	108	Ref		Ref				
	1	89	1.59	0.99-2.55	1.88	1.14-3.14	0.014		
	2	28	2.00	0.92-4.35	2.54	1.09-5.90	0.030		
	≥3	18	4.28	1.22-15.03	4.39	1.18-16.31	0.027		
<b>Other</b>									
Chemotherapy	No	126	Ref		Ref				
	Yes	153	2.36	1.50-3.73	2.03	1.23-3.36	0.006		
<b>Digestive system</b>									
-	-	-	-	-	-	-	-		
<b>Sense organs</b>									
Chemotherapy	No	103	Ref		Ref				
	Yes	122	1.68	1.12-2.52	2.25	1.44-3.51	0.000		
#Comorbidities	0	91	Ref		Ref				
	1	78	1.65	1.04-2.60	1.95	1.21-3.15	0.006		

	2	29	2.38	1.15-4.94	3.87	1.71-8.78	0.001
	≥3	19	5.33	2.07-13.70	10.56	2.36-47.23	0.002
<b>Heart</b>							
Age	<50	24	2.41	1.21-4.81	2.41	1.21-4.81	0.013
	50-60	19	1.03	0.51-2.06	1.03	0.51-2.06	0.943
	60-70	18	Ref		Ref		
	>70	16	1.95	0.91-4.15	1.95	0.91-4.15	0.084
<b>Physical</b>							
<b>Body parts</b>							
Type highest operation	Breast conserving	143	Ref		Ref		
	Amputation	109	1.54	0.99-2.39	1.54	0.99-2.39	0.053
<b>Sensitivity</b>							
Chemotherapy	No	73	Ref		Ref		
	Yes	116	2.69	1.79-4.05	2.53	1.68-3.83	0.000
<b>Respiratory</b>							
Age	<50	15	0.59	0.30-1.17	0.52	0.26-1.05	0.025
	50-60	22	0.06	0.30-1.01	0.54	0.29-1.01	0.054
	60-70	34	Ref		Ref		
	>70	23	1.49	0.78-2.84	1.64	0.85-3.18	0.143
<b>Female reproductive system</b>							
Chemotherapy	No	111	Ref		Ref		
	Yes	145	2.56	1.66-3.94	2.07	1.26-3.41	0.004
Age	<50	65	3.12	1.62-6.00	2.97	1.28-6.85	0.011
	50-60	88	2.54	1.31-0.95	2.04	1.11-3.74	0.021
	60-70	69	Ref		Ref		
	>70	34	0.87	0.47-1.60	1.24	0.64-2.41	0.519
<b>Breast area</b>							
Radiotherapy	No	52	Ref		Ref		
	Yes	186	2.10	1.34-3.29	2.13	1.09-4.20	0.028

### 3.4.2 Influencing variables of primary care use for a complaint

On average, four variables of the univariate regression were taken into the multivariate regression (Table 5). The number of comorbidities is the most common variable. This variable indicated a higher chance of using primary care. Having three or more comorbidities at the same time had the highest chance of using primary care for the following groups: tiredness, other, digestive system, sense organs, heart, body parts, sensitivity and respiratory system. Having two comorbidities at the same time, had only a higher chance for digestive system and heart complaints. Work is the second most common factor. It indicated a higher chance for tiredness, other, female reproductive system and complaints in the breast area. In all these complaint groups, being incapacitated to work was the variable with the highest chance. For tiredness and 'other', also being unemployed indicated a higher chance. Stage 2 positively affected 'other' (OR 2.19, CI: 1.20-3.99), for sense organs, being operated in academic hospital indicated a higher chance (OR 6.89, CI: 1.51-31.52) and for body parts target therapy indicated a lower chance (OR 0.28, CI: 0.12-0.71).

*Table 6: Effect of visiting a physician for a complaint*

Complaints		N	Univariable		Multivariable		P
			OR	95% CI	OR	95% CI	
<b>Psychosocial</b>							
<b>Tiredness</b>							
Work	Employed or school going	23	Ref		Ref		
	Unemployed	5	2.89	0.91-9.23	3.36	1.00-11.26	0.050
	Incapacitated	7	3.68	1.29-10.47	3.24	0.98-10.77	0.054
	Housewife	7	1.04	0.41-2.60	0.80	0.29-2.23	0.671
#Comorbidities	Retirement	29	1.47	0.81-2.68	1.19	0.44-2.86	0.814
0	22	Ref			Ref		
1	30	2.27	1.24-4.15	2.37	1.28-4.40	0.006	
2	10	2.65	1.13-6.18	1.93	0.74-5.01	0.176	
≥3	9	5.56	2.10-14.69	4.44	1.51-3.09	0.007	
<b>Other</b>							
Work	Employed or school going	28	Ref		Ref		
	Unemployed	6	3.05	1.00-9.26	3.64	1.16-11.40	0.026
	Incapacitated	6	2.29	0.79-6.61	2.45	0.74-8.11	0.144
	Housewife	8	0.96	0.41-2.29	0.71	0.26-1.91	0.499
Stage	Retirement	29	1.15	0.65-2.05	1.12	0.59-2.10	0.734
1	29	Ref			Ref		
2	42	1.83	1.08-3.10	2.19	1.20-3.99	0.011	
3	10	1.56	0.70-3.51	1.93	0.76-4.30	0.103	
#Comorbidities	0	27	Ref		Ref		
1	34	2.13	1.21-3.75	2.05	1.13-3.71	0.018	
2	8	1.57	0.65-3.79	1.30	0.49-3.44	0.599	
≥3	8	3.62	1.37-9.57	3.32	1.14-9.69	0.028	
<b>Digestive system</b>							
#Comorbidities	0	11	Ref		Ref		
1	12	1.64	0.70-3.83	1.67	0.71-3.93	0.244	
2	9	4.91	1.88-12.88	4.76	1.74-13.01	0.002	
	≥3	5	4.49	1.53-16.00	4.05	1.15-14.22	0.029
<b>Sense organs</b>							
Hospital type	General	33	Ref		Ref		
	Teaching	53	1.16	0.71-1.91	1.20	0.71-2.03	0.492
	Academic	5	4.70	1.16-18.48	6.89	1.51-31.52	0.013
#Comorbidities	0	31	Ref		Ref		
1	33	1.73	0.99-3.00	1.78	1.01-3.14	0.045	
2	15	3.24	1.52-6.90	2.24	0.97-5.17	0.059	
≥3	9	3.73	1.44-4.50	2.81	1.00-7.88	0.050	
<b>Heart</b>							
#Comorbidities	0	11	Ref		Ref		

	1	9	1.20	0.48-2.98	1.20	0.48-2.98	0.700
	2	7	3.57	1.29-9.92	3.57	1.29-9.92	0.015
	≥3	6	6.33	2.05-19.51	6.33	2.05-19.51	0.001
<b>Physical</b>							
<b>Body parts</b>							
Target therapy	No	109	Ref		Ref		
	Yes	9	0.49	0.22-1.02	0.28	0.12-0.71	0.007
#Comorbidities	0	42	Ref		Ref		
	1	45	1.85	1.12-3.04	1.81	1.07-3.06	0.027
	2	18	3.06	1.49-6.32	3.17	1.48-6.78	0.003
	≥3	11	3.75	1.49-9.42	4.35	1.60-11.79	0.004
<b>Sensitivity</b>							
#Comorbidities	0	11	Ref		Ref		
	1	16	2.27	1.02-5.08	2.78	0.87-8.89	0.042
	2	5	2.41	0.79-7.39	2.78	0.87-8.89	0.085
	≥3	4	3.74	1.07-13.04	3.95	1.07-14.57	0.039
<b>Respiratory</b>							
#Comorbidities	0	9	Ref		Ref		
	1	10	1.67	0.66-4.22	1.64	0.63-4.27	0.307
	2	5	2.98	0.94-17.84	1.88	0.51-7.03	0.346
	≥3	8	12.10	4.00-36.59	10.96	3.01-39.90	0.000
<b>Female reproductive system</b>							
Work	Employed or school going	14	Ref		Ref		
	Unemployed	4	3.69	1.04-13.12	3.56	0.97-13.13	0.056
	Incapacitated	6	5.01	1.65-15.59	5.69	1.61-20.17	0.007
	Housewife	2	0.46	1.00-2.11	0.23	0.03-1.81	0.161
	Retirement	22	1.81	0.89-3.70	1.60	0.75-3.45	0.227
<b>Breast area</b>							
Work	Employed or school going	22	Ref		Ref		
	Unemployed	3	1.52	0.40-5.83	1.52	0.40-5.83	0.539
	Incapacitated	7	3.88	1.36-11.07	3.88	1.36-11.08	0.011
	Housewife	9	1.48	0.63-3.49	1.48	0.63-3.49	0.368
	Retirement	23	1.15	0.61-2.16	1.15	0.61-2.16	0.669

## 4. Discussion

The objective of the study was to gain insight in the late effects of breast cancer patients up to five years after treatment and whether these patients visit a physician for these effects. First, we determined what late psychosocial and physical effects patient experienced in the years after their breast cancer treatment based on the questionnaire and if they visited a physician for their experienced effects. Based on more than 400 responses, it was found that the complaints about tiredness, memory/concentration problems and menopause complaints were reported the most. The high percentage of memory/concentration problems is also stated in more studies, were it was a percentage of 23% (17). However, primary care use was the highest for other complaints than these. Bone fractures led to the highest primary care use, but only occurred in 4% of respondents. Bone fractures had the highest percentage of using primary care, but had the second lowest percentage of having the complaint. Radiotherapy had almost none risk on reporting a complaint, only for complaints in the breast area. This could be due too short follow-up. The follow-up was five years for this research, but late effects of radiotherapy are usually observed after ten years (18).

Also, we determined which factors influenced the occurrence of late effects and which factors influenced primary care use. Based on multivariate regression analyses, chemotherapy was the most common factor on the occurrence of late effects. On the other hand, having an age below 50 years or between 50 and 60 years, both had a protective effect for complaints on respiratory system. For visiting a physician, comorbidities (especially three or more) had the most common highest risk for visiting a physician, while target therapy has a protective effect on having complaints on body parts.

The most reported complaints like tiredness, memory/concentration problems or menopause were not the complaints with a high percentage of visiting a physician. A reason could be that patients thought that it is a standard part of breast cancer treatment. Giving information about the consequences of treatment is very important. Not all patients know what all the possible (late) effects are (9).

Since we found that target therapy had a negative effect on visiting a physician for having complaints on body parts, there could be some extra attention given about this complaint on patients by a physician on the moment the patient gets information about her treatment. Positive is the expected increasing role of the General Physician in the healthcare path of a cancer patient (19).

### 4.1 Strengths and limitations

There were not that much studies done about a complete overview on all the complaints of breast cancer treatment and which effects these complaints triggered. Previous studies focused more on smaller groups of complaints, like only the effects of chemotherapy (20). The same applies for visiting a physician. There is also no complete overview with all the effects and which variables have a positive or negative effect on visiting a physician.

The connection between the NCR and patient reported experiences, makes this study unique in

design. There was a respondent rate of more than 400 respondents (41%) and the group was representative, as it was comparable to the non-responders group. So, we believe that we reflected reported complaints of breast cancer treatment and associated primary care use, well.

Participation was opt-in, what could lead to respondent bias. Those who responded had probably more complaints than those who did not respond. There was also information bias. Probably not all patients filled in the questionnaire correctly. This can be seen in the percentage of respondents visiting a physician for bone fracture, this percentage is not 100%. It could also have been possible that patients thought the question was about only going to a general practitioner, instead of all care givers. Therefore they responded with 'no' about seeing a physician.

In this study is not asked about the reasons for visiting a physician or not, this could be interesting for further research. Also a longer follow-up would be interesting, because not all late effects are visible within five years.

## 5. Conclusion

In conclusion, the study revealed that patients experienced a lot of complaints after having breast cancer treatment up to five years. These were most often tiredness and memory/concentration problems, but patients do not use associated primary care for it. Besides, there were different variables that indicated a higher risk on reporting a complaint, where chemotherapy was the most common one. The same applies to using associated primary care, where having more comorbidities (at the moment of completing the questionnaire) was the most common. Target therapy had a protective effect on complaints on body parts. By knowing these effects, extra information about the effects of breast cancer treatment could be given to patients in the early stadium of their treatment trajectory.

### 5.1 Disclosures

There was no conflict of interest reported.

### 5.2 Ethical approval

Approval from the Committee of Privacy of the NCR and the Committee of Privacy of NIVEL were obtained for this study. The Twente Medical Ethical Committee did not consider it as Medical Research Involving Human Subjects Act (WMO) mandatory.

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## Appendix

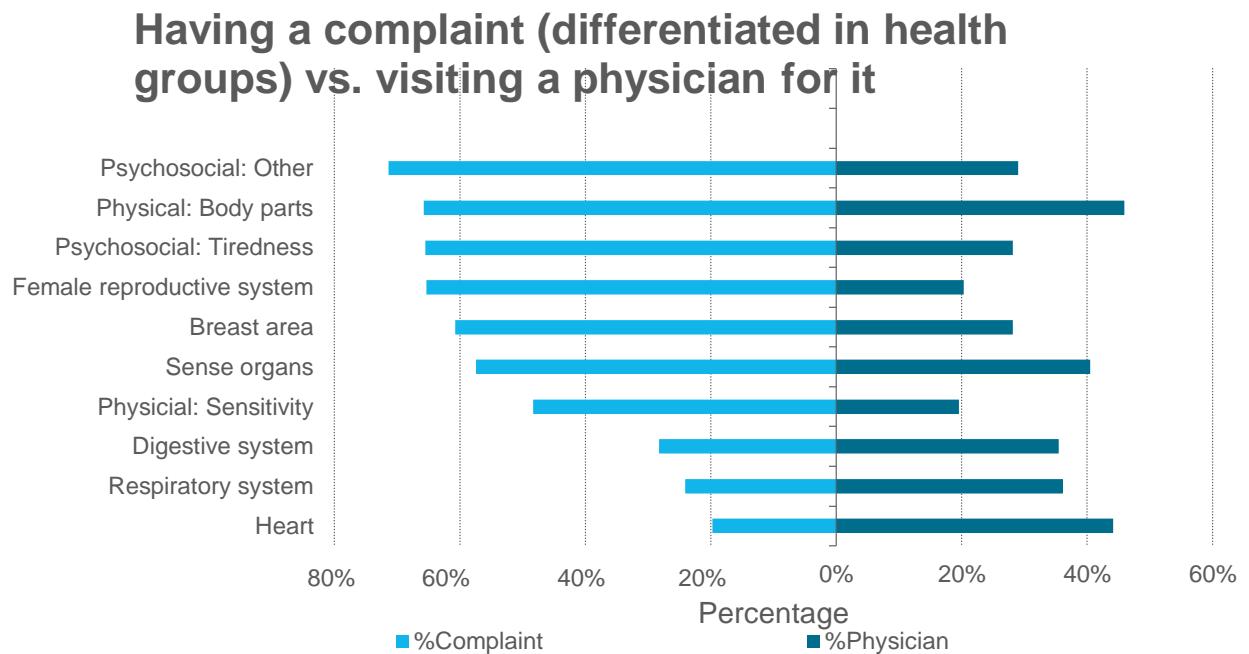
### Appendix I: Overview with numbers of reported complaints and associated primary care use

*Table 7: Number of complaints and number of associated primary care use (with percentages)*

Complaint	#Complaint (Total, N=392)	%Complaint	#Visiting physician (Total, N=392)	%Visiting physician
<b>Tiredness</b>	256	65%	72	28%
<b>Abdomen/Stomach complaints</b>	51	13%	27	53%
<b>Nausea</b>	36	9%	10	28%
<b>Diarrhea</b>	66	17%	17	26%
<b>Eye complaints</b>	71	18%	32	45%
<b>Ear complaints</b>	42	11%	16	38%
<b>Palpitations</b>	52	13%	21	40%
<b>Neck/shoulder complaints</b>	123	32%	44	36%
<b>Back complaints</b>	110	28%	33	30%
<b>Chest pain</b>	36	9%	18	50%
<b>Arm/elbow/hand/wrist complaints</b>	129	33%	46	36%
<b>Bone fracture</b>	14	4%	11	79%
<b>Leg/hip/knee/foot complaints</b>	126	32%	53	42%
<b>Muscle strain</b>	115	29%	18	16%
<b>Headache</b>	75	19%	16	21%
<b>Tingling fingers/feet/toes</b>	131	34%	23	18%
<b>Dizziness</b>	95	24%	18	19%
<b>Anxiousness</b>	86	22%	16	19%
<b>Depressed</b>	68	17%	22	32%
<b>Sudden stress</b>	35	9%	4	11%
<b>Being irritable</b>	91	23%	6	7%
<b>Memory/concentration problems</b>	172	44%	15	9%
<b>Sleep problems</b>	153	39%	36	24%
<b>Increased drug/drank abuse</b>	13	3%	2	15%
<b>Short of breath at rest</b>	27	7%	13	48%
<b>Coughing</b>	81	21%	26	32%
<b>Nose complaints</b>	66	17%	13	20%
<b>Skin complaints</b>	88	22%	44	50%
<b>Urination problems</b>	34	9%	13	38%
<b>Sexuality problems</b>	69	18%	9	13%
<b>Menopause</b>	158	40%	20	13%
<b>Weight changing</b>	131	33%	14	11%
<b>Hypersensitivity light/sound</b>	33	8%	3	9%
<b>Pain/swelling affected breast area</b>	126	32%	37	29%
<b>Hypersensitivity affected breast area</b>	132	34%	26	20%
<b>Skin problems affected breast area</b>	43	11%	15	35%
<b>Early menopause complaints</b>	30	8%	1	3%
<b>Axilla complaints</b>	97	25%	26	27%
<b>Restriction of arm movement</b>	92	23%	17	18%
<b>Dry mouth</b>	86	22%	4	5%
<b>Hair loss</b>	92	23%	7	8%

## Appendix II: Late effects differentiated in groups and visiting a physician for it

*Figure 2: Having a complaint (differentiated in health groups) vs. visiting a physician for it*



*Table 8: Having a complaint (differentiated in health groups) vs. visiting a physician for it in numbers and percentages*

Category	#Complaint (Total, N=392)	%Complaint	#Visiting physician (Total, N=392)	%Visiting physician
Psychosocial: other	279	71%	81	44%
Physical: body parts	257	66%	118	36%
Psychosocial: Tiredness	256	65%	72	35%
Female reproductive system	256	65%	52	20%
Breast area	238	61%	67	40%
Sense organs	225	57%	91	28%
Physical: sensitivity	189	20%	37	20%
Digestive system	110	28%	39	28%
Respiratory system	94	24%	34	46%
Heart	77	20%	34	29%

### Appendix III: Logistic regression

The tables are based on the health complaint groups (Table 3). These tables show the all the variables used and the outcomes for the univariate regression ( $p<0.010$ ) and multivariate regression ( $p<0.050$ ).

#### Influencing factors on the occurrence of late effects

*Table 9: Psychosocial: Tiredness*

	N	Univariable		Multivariable		P
		OR	95% CI	OR	95% CI	
<b>Psychosocial: Tiredness</b>						
<b>Partner</b>	No	41	0.80	0.44-1.45	-	-
	Ref	212				
<b>Hormonotherapy</b>	No	96	Ref		Ref	
	Yes	160	1.85	1.21-2.82	1.57	0.99-2.49
<b>Radiotherapy</b>	No	64	Ref		Ref	
	Yes	192	1.5	0.95-2.37	1.56	0.95-2.56
<b>Chemotherapy</b>	No	113	Ref		Ref	
	Yes	143	2.29	1.49-3.53	2.16	1.29-3.64
<b>Target therapy</b>	No	219	Ref		-	
	Yes	37	2.29	1.49-3.53		
<b>Age</b>	<50	60			1.21	0.46-3.19
	50-60	83			1.07	0.49-2.33
	60-70	72	Ref		Ref	
	>70	41			0.67	0.33-1.38
<b>Children</b>	Yes, home living	75	Ref		Ref	
	Yes, living away	146			0.97	0.49-1.92
	No	33			0.61	0.29-1.28
<b>Education</b>	Secondary school or lower	68	Ref		-	
	Intermediate vocational training	110	1.23	0.75-0.91	-	-
	Higher vocational training and university	75	1.60	0.92-2.81	-	-
<b>Hospital type</b>	General	102	Ref		-	-
	Teaching	148	1.04	0.68-1.59	-	-
	Academic	6	1.08	0.26-4.48	-	-
<b>Type highest operation</b>	Breast conserving	154	Ref		-	-
	Amputation	97	0.85	0.56-1.30	-	-
	Unknown	5	2.50	0.29-21.77	-	-
<b>#Comorbidities</b>	0	108	Ref		Ref	
	1	89	1.59	0.99-2.55	1.88	1.14-3.14
	2	28	2.00	0.92-4.35	2.54	1.09-5.90
	≥3	18	4.28	1.22-15.03	4.39	1.18-16.31

*Table 10: Psychosocial: Other*

	N	Univariable		Multivariable		P
		OR	95% CI	OR	95% CI	
<b>Psychosocial: Other</b>						
<b>Partner</b>	No	45	0.79	0.42-1.49	-	-
	Yes	231	Ref		-	-
<b>Hormonotherapy</b>	No	114	Ref		-	-
	Yes	165	1.35	0.87-2.09	-	-
<b>Radiotherapy</b>	No	83	Ref		-	-
	Yes	196	0.68	0.41-1.13	-	-
<b>Chemotherapy</b>	No	126	Ref		Ref	
	Yes	153	2.36	1.50-3.73	2.03	1.23-3.36
<b>Target therapy</b>	No	242	Ref		-	-
	Yes	37	1.27	0.64-2.54	-	-
<b>Age</b>	<50	67	2.29	1.13-4.48	1.77	0.87-1.77
	50-60	88	1.12	0.35-1.12	1.08	0.62-1.88
	60-70	83	Ref		Ref	
	>70	41	0.88	0.46-1.67	1.12	0.57-2.22
<b>Children</b>	Yes, home living	81	Ref		-	-
	Yes, living away	156	0.64	0.37-1.10	-	-
	No	39	0.55	0.27-1.13	-	-
<b>Education</b>	Secondary school or lower	73	Ref		-	-
	Intermediate vocational training	124	1.51	0.90-2.53	-	-

	Higher vocational training and university	79	1.60	0.90-2.87	-	-	-
<b>Hospital type</b>	General	115	Ref	-	-	-	-
	Teaching	156	0.86	0.55-1.35	-	-	-
	Academic	8	2.99	0.36-24.62	-	-	-
<b>Type highest operation</b>	Breast conserving	157	Ref	-	Ref	-	-
	Amputation	116	1.50	0.944-2.38	1.23	0.84-2.17	0.219
	Unknown	6	1 (omitted)	-	1 (omitted)	-	-

Table 11: Digestive system

	N	Univariable		Multivariable		P
		OR	95% CI	OR	95% CI	
<b>Digestive system</b>						
<b>Partner</b>	No	14	1.32	0.69-2.51	-	-
	Yes	95	Ref	-	-	-
<b>Hormonotherapy</b>	No	44	Ref	-	-	-
	Yes	66	1.18	0.76-1.85	-	-
<b>Radiotherapy</b>	No	30	Ref	-	-	-
	Yes	80	1.03	0.63-1.70	-	-
<b>Chemotherapy</b>	No	48	Ref	-	Ref	-
	Yes	62	1.50	0.96-2.34	1.50	0.96-2.34
<b>Target therapy</b>	No	92	Ref	-	-	-
	Yes	18	1.67	0.84-2.93	-	-
<b>Age</b>	<50	25	1.10	0.59-2.03	-	-
	50-60	33	0.88	0.50-1.54	-	-
	60-70	35	Ref	-	-	-
<b>Children</b>	>70	17	0.93	0.47-1.84	-	-
	Yes, home living	31	Ref	-	-	-
	Yes, living away	61	0.89	0.53-1.48	-	-
<b>Education</b>	No	17	0.95	0.47-1.92	-	-
	Secondary school or lower	32	Ref	-	-	-
	Intermediate vocational training	42	0.83	0.49-1.43	-	-
<b>Hospital type</b>	Higher vocational training and university	35	1.23	0.69-2.19	-	-
	General	42	Ref	-	-	-
	Teaching	65	1.11	0.70-1.75	-	-
<b>Type highest operation</b>	Academic	3	1.36	0.32-5.67	-	-
	Breast conserving	61	Ref	-	-	-
	Amputation	47	1.23	0.78-1.93	-	-
	Unknown	2	1.39	0.25-7.75	-	-

Table 12: Sense organs

	N	Univariable		Multivariable		P
		OR	95% CI	OR	95% CI	
<b>Sense organs</b>						
<b>Partner</b>	No	38	0.78	0.45-1.37	-	-
	Yes	185	Ref	-	-	-
<b>Hormonotherapy</b>	No	92	Ref	-	-	-
	Yes	133	1.24	0.83-1.85	-	-
<b>Radiotherapy</b>	No	61	Ref	-	-	-
	Yes	164	1.08	0.69-1.69	-	-
<b>Chemotherapy</b>	No	103	Ref	-	Ref	-
	Yes	122	1.68	1.12-2.52	2.25	1.44-3.51
<b>Target therapy</b>	No	193	Ref	-	-	-
	Yes	32	1.46	0.78-2.74	-	-
<b>Age</b>	<50	45	1.03	0.58-1.81	-	-
	50-60	71	1.08	0.65-1.78	-	-
	60-70	67	Ref	-	-	-
<b>Children</b>	>70	42	1.57	0.84-2.93	-	-
	Yes, home living	55	Ref	-	-	-
	Yes, living away	135	1.32	0.83-2.11	-	-
<b>Education</b>	No	34	1.21	0.64-2.31	-	-
	Secondary school or lower	63	Ref	-	-	-
	Intermediate vocational training	100	1.15	0.71-1.86	-	-
<b>Hospital type</b>	Higher vocational training and university	60.	1.01	0.59-1.73	-	-
	General	96	Ref	-	-	-
	Teaching	123	0.78	0.52-1.18	-	-
<b>Type highest operation</b>	Academic	6	1.29	0.31-5.36	-	-
	Breast conserving	133	Ref	-	-	-

	Amputation	89	1.02	0.67-1.54	-	-	-
	Unknown	3	0.74	0.15-3.77	-	-	-
#Comorbidities	0	91	Ref		Ref		
	1	78	1.65	1.04-2.60	1.95	1.21-3.15	0.006
	2	29	2.38	1.15-4.94	3.87	1.71-8.78	0.001
	≥3	19	5.33	2.07-13.70	10.56	2.36-47.23	0.002

Table 13: Heart

	N	Univariable		Multivariable		P
		OR	95% CI	OR	95% CI	
<b>Heart</b>						
<b>Partner</b>	No	13	0.86	0.44-1.68	-	-
	Yes	64	Ref	-	-	-
<b>Hormonotherapy</b>	No	36	Ref	-	-	-
	Yes	41	0.82	0.50-1.35	-	-
<b>Radiotherapy</b>	No	21	Ref	-	-	-
	Yes	56	1.03	0.89-1.80	-	-
<b>Chemotherapy</b>	No	33	Ref	-	-	-
	Yes	44	1.51	0.91-2.49	-	-
<b>Target therapy</b>	No	66	Ref	-	-	-
	Yes	11	1.21	0.59-2.48	-	-
<b>Age</b>	<50	24	2.41	1.21-4.81	2.41	1.21-4.81
	50-60	19	1.03	0.51-2.06	1.03	0.51-2.06
	60-70	18	Ref	-	-	0.943
	>70	16	1.95	0.91-4.15	1.95	0.91-4.15
<b>Children</b>	Yes, home living	23	Ref	-	-	-
	Yes, living away	41	0.79	0.44-1.40	-	-
	No	13	1.00	0.46-2.15	-	-
<b>Education</b>	Secondary school or lower	19	Ref	-	-	-
	Intermediate vocational training	37	1.37	0.74-2.53	-	-
	Higher vocational training and university	21	1.21	0.61-2.40	-	-
<b>Hospital type</b>	General	33	Ref	-	-	-
	Teaching	41	0.84	0.50-1.40	-	-
	Academic	3	1.88	0.45-7.91	-	-
<b>Type highest operation</b>	Breast conserving	44	Ref	-	-	-
	Amputation	31	1.08	0.65-1.80	-	-
	Unknown	2	2.13	0.38-11.97	-	-

Table 14: Physical: Body parts

	N	Univariable		Multivariable		P
		OR	95% CI	OR	95% CI	
<b>Physical: Body parts</b>						
<b>Partner</b>	No	42	0.79	0.44-1.44	-	-
	Yes	213	Ref	-	-	-
<b>Hormonotherapy</b>	No	103	Ref	-	-	-
	Yes	154	1.41	0.92-2.15	-	-
<b>Radiotherapy</b>	No	74	Ref	-	-	-
	Yes	183	0.84	0.52-1.35	-	-
<b>Chemotherapy</b>	No	127	Ref	-	-	-
	Yes	130	1.22	0.81-1.86	-	-
<b>Target therapy</b>	No	226	Ref	-	-	-
	Yes	31	0.88	0.47-1.65	-	-
<b>Age</b>	<50	57	1.65	0.91-3.00	-	-
	50-60	86	1.53	0.91-2.58	-	-
	60-70	72	Ref	-	-	-
	>70	42	1.39	0.74-2.62	-	-
<b>Children</b>	Yes, home living	76	Ref	-	-	-
	Yes, living away	144	0.65	0.39-1.09	-	-
	No	36	0.58	0.29-1.14	-	-
<b>Education</b>	Secondary school or lower	67	Ref	-	-	-
	Intermediate vocational training	115	1.46	0.89-2.40	-	-
	Higher vocational training and university	73	1.52	0.87-2.65	-	-
<b>Hospital type</b>	General	102	Ref	-	-	-
	Teaching	147	1.05	0.68-1.61	-	-
	Academic	8	4.39	0.54-36.02	-	-
<b>Type highest operation</b>	Breast conserving	143	Ref	-	-	-
	Amputation	109	1.54	0.99-2.39	1.54	0.99-2.39
	Unknown	5	3.11	0.36-27.07	3.11	0.36-27.09

**Table 15: Physical: Sensitivity**

	N	Univariable		Multivariable		P
		OR	95% CI	OR	95% CI	
<b>Physical: Sensitivity</b>						
Partner	No	28	1.08	0.62-1.87	-	-
	Yes	159	Ref	-	-	-
Hormonotherapy	No	75	Ref	-	-	-
	Yes	114	1.30	0.87-1.94	-	-
Radiotherapy	No	50	Ref	-	-	-
	Yes	139	1.12	0.72-1.75	-	-
Chemotherapy	No	73	Ref	Ref	-	-
	Yes	116	2.69	1.79-4.05	2.53	1.68-3.83
Target therapy	No	162	Ref	-	-	-
	Yes	27	1.36	0.75-2.49	-	-
Age	<50	41	0.96	0.55-1.68	-	-
	50-60	52	0.67	0.40-1.02	-	-
	60-70	63	Ref	-	-	-
	>70	33	1.03	0.56-1.89	-	-
Children	Yes, home living	49	Ref	-	-	-
	Yes, living away	118	1.24	0.78-1.97	-	-
-	No	20	0.58	0.30-1.12	-	-
Education	Secondary school or lower	49	Ref	-	-	-
	Intermediate vocational training	89	1.45	0.90-2.35	-	-
-	Higher vocational training and university	49	1.12	0.66-1.91	-	-
Hospital type	General	80	Ref	-	-	-
	Teaching	105	0.86	0.57-1.29	-	-
	Academic	4	0.78	0.20-3.01	-	-
Type highest operation	Breast conserving	100	Ref	Ref	-	-
	Amputation	84	1.61	1.07-2.42	1.45	0.95-2.22
	Unknown	5	6.6	0.76-57.38	4.79	0.54-42.90
						0.161

**Table 16: Respiratory system**

	N	Univariable		Multivariable		P
		OR	95% CI	OR	95% CI	
<b>Respiratory system</b>						
Partner	No	18	0.68	0.38-1.25	-	-
	Yes	74	Ref	-	-	-
Hormonotherapy	No	41	Ref	-	-	-
	Yes	53	0.97	0.60-1.54	-	-
Radiotherapy	No	26	Ref	-	-	-
	Yes	68	1.00	0.59-1.68	-	-
Chemotherapy	No	43	Ref	-	-	-
	Yes	51	1.33	0.84-2.12	-	-
Target therapy	No	77	Ref	Ref	-	-
	Yes	17	1.83	0.96-3.47	2.13	1.10-4.16
Age	<50	15	0.59	0.30-1.17	0.52	0.26-1.05
	50-60	22	0.06	0.30-1.01	0.54	0.29-1.01
	60-70	34	Ref	Ref	-	-
	>70	23	1.49	0.78-2.84	1.64	0.85-3.18
Children	Yes, home living	19	Ref	-	-	-
	Yes, living away	59	1.59	0.89-2.84	-	-
	No	14	1.39	0.64-3.03	-	-
Education	Secondary school or lower	25	Ref	-	-	-
	Intermediate vocational training	41	1.13	0.64-1.99	-	-
	Higher vocational training and university	26	1.14	0.61-2.14	-	-
Hospital type	General	44	Ref	Ref	-	-
	Teaching	46	0.67	0.42-1.08	0.65	0.40-1.06
	Academic	4	2.07	0.53-8.08	2.42	0.60-9.77
Type highest operation	Breast conserving	53	Ref	-	-	-
	Amputation	41	1.24	0.077-1.98	-	-
	Unknown	0.	1 (omitted)	-	-	-

**Table 17: Female reproductive system and hormones**

	N	Univariable		Multivariable		P
		OR	95% CI	OR	95% CI	

<u>Female reproductive system and hormones</u>						
<b>Partner</b>	No	38	1.17	0.66-2.06	-	-
	Yes	216	Ref		-	-
<b>Hormonotherapy</b>	No	98	Ref		Ref	
	Yes	158	1.76	1.16-2.68	1.54	0.98-2.42
<b>Radiotherapy</b>	No	70	Ref		-	-
	Yes	186	1.07	0.67-1.70		
<b>Chemotherapy</b>	No	111	Ref		Ref	
	Yes	145	2.56	1.66-3.94	2.07	1.26-3.41
<b>Target therapy</b>	No	220	Ref		-	-
	Yes	36	1.55	0.79-3.03		
<b>Age</b>	<50	65	3.12	1.62-6.00	2.97	1.28-6.85
	50-60	88	2.54	1.31-0.95	2.04	1.11-3.74
	60-70	69	Ref		Ref	
	>70	34	0.87	0.47-1.60	1.24	0.64-2.41
<b>Children</b>	Yes, home living	77	Ref		Ref	
	Yes, living away	140	0.57	0.34-0.95	1.30	0.66-2.58
	No	38	0.63	0.32-1.27	0.92	0.43-1.97
<b>Education</b>	Secondary school or lower	63	Ref		Ref	
	Intermediate vocational training	118	1.84	1.12-3.01	1.39	0.91-2.37
	Higher vocational training and university	73	1.70	0.98-2.96	1.42	0.78-2.59
<b>Hospital type</b>	General	101	Ref		-	-
	Teaching	148	1.08	0.71-1.66	-	-
	Academic	7	1.98	0.40-9.83	-	-
<b>Type highest operation</b>	Breast conserving	149	Ref		-	-
	Amputation	103	1.13	0.73-1.73	-	-
	Unknown	4	1.11	0.20-6.21	-	-

*Table 18: Breast area complaints*

		N	Univariable		Multivariable		P
			OR	95% CI	OR	95% CI	
<b>Breast area complaints</b>							
<b>Partner</b>	No	39	0.85	0.48-1.50	-	-	-
	Yes	197	Ref		-	-	-
<b>Hormonotherapy</b>	No	98	Ref		-	-	-
	Yes	140	1.22	0.81-1.84	-	-	-
<b>Radiotherapy</b>	No	52	Ref		Ref		
	Yes	186	2.10	1.34-3.29	0.000.028	1.09-4.20	0.028
<b>Chemotherapy</b>	No	114	Ref		Ref		
	Yes	124	1.41	0.94-2.12	1.56	1.00-2.46	0.053
<b>Target therapy</b>	No	207	Ref		-	-	-
	Yes	31	1.13	0.61-2.10	-	-	-
<b>Age</b>	<50	52	1.16	0.65-2.08	-	-	-
	50-60	75	0.97	0.58-1.62	-	-	-
	60-70	74	Ref		-	-	-
	>70	37	0.89	0.65-2.08	-	-	-
<b>Children</b>	Yes, home living	64	Ref		-	-	-
	Yes, living away	139	1.00	0.62-1.61	-	-	-
	No	33	0.79	0.41-1.52	-	-	-
<b>Education</b>	Secondary school or lower	67	Ref		-	-	-
	Intermediate vocational training	101	1.02	0.63-1.66	-	-	-
	Higher vocational training and university	68	1.20	0.69-2.06	-	-	-
<b>Hospital type</b>	General	100	Ref		-	-	-
	Teaching	132	0.82	0.54-1.25	-	-	-
	Academic	6	1.16	0.28-4.81	-	-	-
<b>Type highest operation</b>	Breast conserving	149	Ref		Ref		
	Amputation	84	0.67	0.44-1.01	1.00	0.53-1.88	0.994
	Unknown	5	2.79	0.23-24.24	4.63	0.47-45.74	0.190
<b>#Comorbidities</b>	0	106	Ref		Ref		
	1	86	1.56	0.98-2.50	1.70	0.61-2.66	0.511
	2	23	1.17	0.57-2.39	1.28	0.62-4.45	0.313
	≥3	14	1.53	0.59-3.96	1.66	0.28-1.22	0.150

## Logistic regression: influence variables on visiting a physician

Table 19: Phychosocial: Tiredness

		N	Univariable OR	95% CI	Multivariable OR	95% CI	P
<b>Psychosocial:</b>							
<b>Tiredness</b>							
<b>Partner</b>	No	13	0.76	0.39-1.50	-	-	-
	Ref	58	Ref	-	-	-	-
<b>Hormonotherapy</b>	No	31	Ref	-	-	-	-
	Yes	41	0.99	0.9-1.66	-	-	-
<b>Radiotherapy</b>	No	20	Ref	-	-	-	-
	Yes	52	0.99	0.56-1.76	-	-	-
<b>Chemotherapy</b>	No	39	Ref	-	-	-	-
	Yes	33	0.86	5.13-1.43	-	-	-
<b>Target therapy</b>	No	66	Ref	-	-	-	-
	Yes	6	0.58	0.24-1.42	-	-	-
<b>Age</b>	<50	17	1.02	0.51-2.04	1.14	0.55-2.35	0.721
	50-60	16	0.56	0.28-1.12	0.64	0.31-1.32	0.229
	60-70	25	Ref	-	Ref	-	-
	>70	14	1.10	0.52-2.30	0.86	0.91-1.87	0.696
<b>Children</b>	Yes, home living	18	Ref	-	-	-	-
	Yes, living away	45	1.20	0.66-2.20	-	-	-
	No	9	0.86	0.36-2.06	-	-	-
<b>Education</b>	Secondary school or lower	17	Ref	-	-	-	-
	Intermediate vocational training	31	1.26	0.66-2.40	-	-	-
	Higher vocational training and university	23	1.55	0.77-3.10	-	-	-
<b>Work</b>	1	63	Ref	-	-	-	-
	2	9	0.76	0.35-1.62	-	-	-
<b>Hospital type</b>	General	35	Ref	-	-	-	-
	Teaching	36	0.67	0.40-1.12	-	-	-
	Academic	1	0.44	0.05-3.60	-	-	-
<b>Type highest operation</b>	Breast	44	Ref	-	-	-	-
	conserving	-	-	-	-	-	-
	Amputation	26	0.87	0.51-1.49	-	-	-
	Unknown	2	2.13	0.38-11.97	-	-	-
<b>Stage</b>	1	33	Ref	-	-	-	-
	2	33	1.14	0.67-1.95	-	-	-
	3	6	0.71	0.28-1.82	-	-	-
<b>#Comorbidities</b>	0	22	Ref	-	Ref	-	-
	1	30	2.27	1.24-4.15	2.29	1.25-4.22	0.008
	2	10	2.65	1.13-6.18	2.48	1.03-5.99	0.043
	≥3	9	5.56	2.10-14.69	5.33	1.94-14.62	0.001

Table 20: Phychosocial: Other

		N	Univariable OR	95% CI	Multivariable OR	95% CI	P
<b>Psychosocial: Other</b>							
<b>Partner</b>							
	No	16	0.65	0.35-1.23	-	-	-
	Ref	63	Ref	-	-	-	-
<b>Hormonotherapy</b>	No	30	Ref	-	-	-	-
	Yes	51	1.36	0.82-2.26	-	-	-
<b>Radiotherapy</b>	No	27	Ref	-	-	-	-
	Yes	54	0.71	0.42	-	-	-
<b>Chemotherapy</b>	No	38	Ref	-	-	-	-
	Yes	43	1.24	0.76-2.02	-	-	-
<b>Target therapy</b>	No	73	Ref	-	-	-	-
	Yes	8	0.72	0.32-1.60	-	-	-
<b>Age</b>	<50	18	0.96	0.49-1.88	-	-	-
	50-60	22	0.72	0.38-1.34	-	-	-

	60-70	28	Ref	-	-	-
<b>Children</b>	>70	13	0.87	0.42-1.83	-	-
	Yes, home living	20	Ref	-	-	-
	Yes, living away	50	1.2	0.67-2.14	-	-
<b>Education</b>	No	10	0.86	0.37-1.98	-	-
	Secondary school or lower	19	Ref	-	-	-
	Intermediate vocational training	37	1.39	0.75-2.56	-	-
	Higher vocational training and university	23	1.37	0.70-2.69	-	-
<b>Work</b>	1	70	Ref	-	-	-
	2	10	0.76	0.36-1.57	-	-
<b>Hospital type</b>	General	39	Ref	-	Ref	-
	Teaching	39	0.64	0.39-1.01	0.67	0.40-1.15
	Academic	3	1.53	0.36-6.39	2.10	0.47-9.32
<b>Type highest operation</b>	Breast conserving	45	Ref	-	Ref	-
	Amputation	33	1.14	0.69-1.89	0.79	0.44-1.41
	Unknown	3	4.16	0.81-21.27	3.50	0.32-18.75
<b>Stage</b>	1	29	Ref	-	Ref	-
	2	42	1.83	1.08-3.10	1.88	1.06-3.35
	3	10	1.56	0.70-3.51	1.77	0.71-4.38
<b>#Comorbidities</b>	0	27	Ref	-	Ref	-
	1	34	2.13	1.21-3.75	2.08	1.17-3.72
	2	8	1.57	0.65-3.79	1.56	0.64-3.81
	≥3	8	3.62	1.37-9.57	3.65	1.35-9.87
						0.011

Table 21: Digestive system

		N	Univariable OR	95% CI	Multivariable OR	95% CI	P
<b>Digestive system</b>							
<b>Partner</b>	No	7	0.78	0.32-1.85	-	-	-
	Ref	31	Ref	-	-	-	-
<b>Hormonotherapy</b>	No	17	Ref	-	-	-	-
	Yes	22	0.97	0.50-1.88	-	-	-
<b>Radiotherapy</b>	No	11	Ref	-	-	-	-
	Yes	28	0.97	0.47-2.03	-	-	-
<b>Chemotherapy</b>	No	18	Ref	-	-	-	-
	Yes	21	1.24	0.64-2.41	-	-	-
<b>Target therapy</b>	No	31	Ref	-	-	-	-
	Yes	8	1.95	0.84-4.53	-	-	-
<b>Age</b>	<50	8	0.67	2.75-1.64	-	-	-
	50-60	10	0.53	0.23-1.21	-	-	-
	60-70	17	Ref	-	-	-	-
	>70	4	0.41	0.13-1.29	-	-	-
<b>Children</b>	Yes, home living	10	Ref	-	-	-	-
	Yes, living away	21	0.97	0.44-2.15	-	-	-
<b>Education</b>	No	7	1.27	0.45-3.52	-	-	-
	Secondary school or lower	10	Ref	-	-	-	-
	Intermediate vocational training	16	1.07	0.47-2.44	-	-	-
	Higher vocational training and university	12	1.30	0.54-3.15	-	-	-
<b>Work</b>	1	31	Ref	-	-	-	-
	2	7	1.29	0.54-3.08	-	-	-
<b>Hospital type</b>	General	18	Ref	-	-	-	-

	Teaching	19	0.72	0.62-1.41	-	-	-
	Academic	2	2.21	0.43-11.45	-	-	-
Type highest operation	Breast conserving	22	Ref		-	-	-
	Amputation	17	1.19	0.61-2.32	-	-	-
	Unknown	0	1 (omitted)		-	-	-
Stage	1	20	Ref		-	-	-
	2	16	0.88	0.44-1.75	-	-	-
	3	3	0.59	0.17-2.09	-	-	-
#Comorbidities	0	11	Ref		Ref		
	1	12	1.64	0.70-3.83	1.64	0.70-3.83	0.257
	2	9	4.91	1.88-12.88	4.91	1.87-12.88	0.001
	≥3	5	4.49	1.53-16.00	4..94	1.53-16.00	0.008

Table 22: Sense organs

		N	Univariable OR	95% CI	Multivariable OR	95% CI	P
<b>Sense organs</b>							
<b>Partner</b>	No	16	0.78	0.42-1.47	-	-	-
	Ref	74	Ref		-	-	-
<b>Hormonotherapy</b>	No	42	Ref		-	-	-
	Yes	49	0.84	0.52-1.34	-	-	-
<b>Radiotherapy</b>	No	27	Ref		-	-	-
	Yes	64	0.88	0.53-1.48	-	-	-
<b>Chemotherapy</b>	No	45	Ref		-	-	-
	Yes	46	1.09	0.68-1.74	-	-	-
<b>Target therapy</b>	No	79	Ref		-	-	-
	Yes	12	1.08	0.54-2.16	-	-	-
<b>Age</b>	<50	17	0.97	0.79-1.93	-	-	-
	50-60	28	1.05	0.58-1.93	-	-	-
	60-70	26	Ref		-	-	-
	>70	20	1.70	0.86-3.37	-	-	-
<b>Children</b>	Yes, home living	19	Ref		-	-	-
	Yes, living away	55	1.46	0.81-2.61	-	-	-
<b>Education</b>	No	17	1.81	0.85-3.84	-	-	-
	Secondary school or lower	28	Ref		-	-	-
	Intermediate vocational training	37	0.84	0.78-1.48	-	-	-
	Higher vocational training and university	25	0.93	0.50-1.72	-	-	-
<b>Work</b>	1	74	Ref		-	-	-
	2	17	1.39	0.75-2.58	-	-	-
<b>Hospital type</b>	General	33	Ref		Ref		
	Teaching	53	1.16	0.71-1.91	1.25	0.75-2.10	0.391
	Academic	5	4.70	1.16-18.48	4.55	1.12-18.51	0.034
<b>Type highest operation</b>	Breast conserving	52	Ref		-	-	-
	Amputation	37	1.10	0.68-1.78	-	-	-
	Unknown	2	1.72	0.31-9.66	-	-	-
<b>Stage</b>	1	43	Ref		-	-	-
	2	37	0.94	0.57-1.55	-	-	-
	3	11	1.08	0.50-2.31	-	-	-
<b>#Comorbidities</b>	0	31	Ref		Ref		
	1	33	1.73	0.99-3.00	1.73	0.99-3.04	0.054
	2	15	3.24	1.52-6.90	3.15	1.46-6.77	0.003
	≥3	9	3.73	1.44-4.50	3.91	1.51-10.12	0.005

Table 23: Heart

		N	Univariable OR	95% CI	Multivariable OR	95% CI	P
<b>Heart</b>							
<b>Partner</b>	No	8	0.55	0.24-1.28	-	-	-

	Ref	26	Ref	-	-	-
<b>Hormonotherapy</b>	No	19	Ref	-	-	-
	Yes	15	0.56	0.28-1.14	-	-
<b>Radiotherapy</b>	No	11	Ref	-	-	-
	Yes	23	0.78	0.37-1.67	-	-
<b>Chemotherapy</b>	No	19	Ref	-	-	-
	Yes	15	0.81	0.40-1.64	-	-
<b>Target therapy</b>	No	30	Ref	-	-	-
	Yes	4	0.92	0.31-2.74	-	-
<b>Age</b>	<50	8	1.55	0.55-4.31	-	-
	50-60	8	0.97	0.35-2.66	-	-
	60-70	8	Ref	-	-	-
	>70	10	2.67	0.99-7.14	-	-
<b>Children</b>	Yes, home living	8	Ref	-	-	-
	Yes, living away	21	1.24	0.53-2.90	-	-
<b>Education</b>	No	5	1.11	0.35-3.57	-	-
	Secondary school or lower	9	Ref	-	-	-
	Intermediate vocational training	15	1.11	0.47-2.64	-	-
	Higher vocational training and university	10	1.19	0.46-3.06	-	-
<b>Work</b>	1	29	Ref	-	-	-
	2	5	0.95	0.35-2.58	-	-
<b>Hospital type</b>	General	13	Ref	-	-	-
	Teaching	20	1.09	0.52-2.25	-	-
	Academic	1	1.38	0.16-11.95	-	-
<b>Type highest operation</b>	Breast conserving	20	Ref	-	-	-
	Amputation	14	1.06	0.52-2.17	-	-
	Unknown	0	1 (omitted)	-	-	-
<b>Stage</b>	1	18	Ref	-	-	-
	2	13	0.78	0.37-1.66	-	-
	3	3	0.67	0.19-2.37	-	-
<b>#Comorbidities</b>	0	11	Ref	Ref		
	1	9	1.20	0.48-2.98	1.20	0.48-2.98
	2	7	3.57	1.29-9.92	3.57	1.29-9.92
	≥3	6	6.33	2.05-19.51	6.33	2.05-19.51
						0.001

Table 24: Physical: Body parts

		N	Univariable OR	95% CI	Multivariable OR	95% CI	P
<b>Physical: Body parts</b>							
<b>Partner</b>	No	18	0.97	0.53-1.77	-	-	-
	Ref	98	Ref	-	-	-	-
<b>Hormonotherapy</b>	No	44	Ref	-	-	-	-
	Yes	74	1.39	0.89-2.16	-	-	-
<b>Radiotherapy</b>	No	45	Ref	-	Ref	-	-
	Yes	73	0.49	0.31-0.78	0.55	0.27-1.11	0.097
<b>Chemotherapy</b>	No	67	Ref	-	-	-	-
	Yes	51	0.72	0.46-1.11	-	-	-
<b>Target therapy</b>	No	109	Ref	-	Ref	-	-
	Yes	9	0.49	0.22-1.02	0.28	0.12-0.71	0.007
<b>Age</b>	<50	27	1.39	0.75-2.57	-	-	-
	50-60	33	1.00	0.57-1.76	-	-	-
	60-70	32	Ref	-	-	-	-
	>70	26	1.95	1.03-3.72	-	-	-
<b>Children</b>	Yes, home living	34	Ref	-	Ref	-	-
	Yes, living away	71	0.96	0.58-1.57	0.81	0.47-1.41	0.464
<b>Education</b>	No	12	0.53	0.25-1.12	0.52	0.23-1.17	0.114
	Secondary school or	29	Ref	-	-	-	-

	lower						
	Intermediate vocational training	53	1.31	0.77-2.23	-	-	-
	Higher vocational training and university	34	1.35	0.75-2.43	-	-	-
<b>Work</b>	1	105	Ref		Ref		
	2	12	0.54	0.28-1.07	1 (omitted)		
<b>Hospital type</b>	General	50	Ref		-	-	-
	Teaching	64	0.86	0.55-1.33	-	-	-
	Academic	4	1.71	0.44-6.65	-	-	-
<b>Type highest operation</b>	Breast conserving	60	Ref		Ref		
	Amputation	53	1.51	0.97-2.36	1.02	0.52-1.99	0.956
	Unknown	5	14.25	1.63-124.444		1.46-172.12	0.023
<b>Stage</b>	1	54	Ref		-	-	-
	2	51	1.07	0.68-1.69	-	-	-
	3	13	0.99	0.48-2.05	-	-	-
<b>#Comorbidities</b>	0	42	Ref		Ref		
	1	45	1.85	1.12-3.04	1.81	1.07-3.06	0.027
	2	18	3.06	1.49-6.32	3.17	1.48-6.78	0.003
	≥3	11	3.75	1.49-9.42	4.35	1.60-11.79	0.004

Table 25: Physical: Sensitivity

		N	Univariable OR	95% CI	Multivariable OR	95% CI	P
<b>Physical: Sensitivity</b>							
<b>Partner</b>	No	4	1.57	0.53-4.49	-	-	-
	Ref	33	Ref		-	-	-
<b>Hormonotherapy</b>	No	17	Ref		-	-	-
	Yes	20	0.88	0.44-1.73	-	-	-
<b>Radiotherapy</b>	No	19	Ref		Ref		
	Yes	18	0.32	0.02-0.63	0.67	0.20-2.27	0.514
<b>Chemotherapy</b>	No	17	Ref		-	-	-
	Yes	20	1.26	0.64-2.48	-	-	-
<b>Target therapy</b>	No	33	Ref		-	-	-
	Yes	4	0.83	0.28-2.46	-	-	-
<b>Age</b>	<50	9	1.15	0.46-2.86	-	-	-
	50-60	11	0.88	0.37-2.09	-	-	-
	60-70	12	Ref		-	-	-
	>70	5	0.79	0.67-2.35	-	-	-
<b>Children</b>	Yes, home living	10	Ref		-	-	-
	Yes, living away	22	1.01	0.46-2.34	-	-	-
	No	5	0.87	0.28-2.68	-	-	-
<b>Education</b>	Secondary school or lower	7	Ref		-	-	-
	Intermediate vocational training	18	1.81	0.73-4.47	-	-	-
	Higher vocational training and university	12	1.93	0.73-5.11	-	-	-
<b>Work</b>	1	32	Ref		-	-	-
	2	5	0.86	0.32-2.30	-	-	-
<b>Hospital type</b>	General	16	Ref		-	-	-
	Teaching	20	0.87	0.44-1.74	-	-	-
	Academic	1	1.11	0.13-9.45	-	-	-
<b>Type highest operation</b>	Breast conserving	14	Ref		Ref		
	Amputation	19	2.21	1.04-4.55	1.54	0.46-5.14	0.483
	Unknown	4	31.14	5.24-184.92			
<b>Stage</b>	1	13	Ref		Ref		
	2	21	1.92	0.9.-3.79	1.49	0.67-3.29	0.330

#Comorbidities	3	3	0.96	0.26-3.51	0.54	0.10-2.83	0.470
	0	11	Ref		Ref		
	1	16	2.27	1.02-5.08	2.42	1.03-5.68	0.042
	2	5	2.41	0.79-7.39	2.78	0.87-8.89	0.085
	≥3	4	3.74	1.07-13.04	3.95	1.07-14.57	0.039

Table 26: Respiratory system

	N	Univariable OR	95% CI	Multivariable OR	95% CI	P
<b>Respiratory system</b>						
<b>Partner</b>	No	6	0.81	0.32-2.05	-	-
	Ref	27	Ref	-	-	-
<b>Hormonotherapy</b>	No	15	Ref	-	-	-
	Yes	19	0.95	0.47-1.93	-	-
<b>Radiotherapy</b>	No	9	Ref	-	-	-
	Yes	25	1.07	0.48-2.36	-	-
<b>Chemotherapy</b>	No	16	Ref	-	-	-
	Yes	18	1.20	0.59-2.42	-	-
<b>Target therapy</b>	No	29	Ref	-	-	-
	Yes	5	1.23	0.45-3.33	-	-
<b>Age</b>	<50	5	0.51	0.18-1.47	0.87	0.21-3.60
	50-60	5	0.32	0.11-0.92	0.50	0.15-1.60
	60-70	14	Ref	-	Ref	0.239
	>70	10	1.46	0.61-3.49	1.17	0.4-3.09
<b>Children</b>	Yes, home living	4	Ref	-	Ref	0.757
	Yes, living away	23	2.85	0.96-8.45	1.98	0.46-8.41
<b>Education</b>	No Secondary school or lower	6	2.83	0.76-10.47	3.54	0.84-14.89
	Intermediate vocational training	7	Ref	-	-	0.084
	Higher vocational training and university	13	1.26	0.49-3.27	-	-
	Higher vocational training and university	13	2.12	0.81-5.53	-	-
<b>Work</b>	1	27	Ref	-	-	-
	2	6	1.27	0.50-3.21	-	-
<b>Hospital type</b>	General	16	Ref	-	-	-
	Teaching	17	0.73	0.36-1.49	-	-
	Academic	1	1.11	0.13-9.45	-	-
<b>Type highest operation</b>	Breast conserving	20	Ref	-	-	-
	Amputation	14	1.07	0.52-2.18	-	-
	Unknown	0	1 (omitted)	-	-	-
<b>Stage</b>	1	12	Ref	-	-	-
	2	17	1.65	0.76-3.56	-	-
	3	5	1.83	0.61-5.49	-	-
<b>#Comorbidities</b>	0	9	Ref	-	Ref	-
	1	10	1.67	0.66-4.22	1.63	0.63-4.20
	2	5	2.98	0.94-17.84	2.31	0.69-7.70
	≥3	8	12.10	4.00-36.59	10.98	3.30-36.49

Table 27: Female reproductive system and hormones

	N	Univariable OR	95% CI	Multivariable OR	95% CI	P
<b>Female reproductive system and hormones</b>						
<b>Partner</b>	No	9	0.85	0.39-1.85	-	-
	Ref	42	Ref	-	-	-
<b>Hormonotherapy</b>	No	17	Ref	-	-	-
	Yes	35	1.66	0.90-3.09	-	-
<b>Radiotherapy</b>	No	15	Ref	-	-	-
	Yes	37	0.94	0.49-1.80	-	-
<b>Chemotherapy</b>	No	23	Ref	-	-	-

	Yes	29	1.39	0.77-2.49	-	-	-
<b>Target therapy</b>	No	50	Ref		Ref		
	Yes	2	0.2	0.06-1.06	0.25	0.06-1.10	0.066
<b>Age</b>	<50	10	0.68	0.30-1.53	-	-	-
	50-60	15	0.66	0.32-1.34	-	-	-
	60-70	21	Ref		-	-	-
	>70	6	0.50	0.19-1.30	-	-	-
<b>Children</b>	Yes, home living	11	Ref		-	-	-
	Yes, living away	32	1.39	0.67-2.89	-	-	-
	No	9	1.52	0.59-3.92	-	-	-
<b>Education</b>	Secondary school or lower	14	Ref		-	-	-
	Intermediate vocational training	25	1.23	0.61-2.48	-	-	-
	Higher vocational training and university	12	0.89	0.39-2.03	-	-	-
<b>Work</b>	1	43	Ref		-	-	-
	2	9	1.20	0.55-2.62	-	-	-
<b>Hospital type</b>	General	21	Ref		-	-	-
	Teaching	29	0.97	0.53-1.76	-	-	-
	Academic	2	1.86	0.36-9.58	-	-	-
<b>Type highest operation</b>	Breast conserving	29	Ref		-	-	-
	Amputation	22	1.17	0.64-2.12	-	-	-
	Unknown	1	1.4	0.16-12.41	-	-	-
<b>Stage</b>	1	20	Ref		-	-	-
	2	24	1.41	0.75-2.65	-	-	-
	3	8	1.82	0.74-4.46	-	-	-
<b>#Comorbidities</b>	0	16	Ref		Ref		
	1	19	1.86	0.92-3.78	1.88	0.92-3.82	0.082
	2	8	2.85	1.12-7.25	2.76	1.08-7.06	0.034
	≥3	5	3.34	1.08-10.31	3.82	1.21-12.08	0.022

Table 28: Breast area complaints

		N	Univariable OR	95% CI	Multivariable OR	95% CI	P
<b>Breast area complaints</b>							
<b>Partner</b>	No	9	1.22	0.57-2.61	-	-	-
	Yes	57	Ref		-	-	-
<b>Hormonotherapy</b>	No	29	Ref		-	-	-
	Yes	38	0.99	0.58-1.69	-	-	-
<b>Radiotherapy</b>	No	19	Ref		-	-	-
	Yes	48	0.97	0.54-1.74	-	-	-
<b>Chemotherapy</b>	No	34	Ref		-	-	-
	Yes	33	1.03	0.61-1.74	-	-	-
<b>Target therapy</b>	No	61	Ref		-	-	-
	Yes	6	0.65	0.26-1.58	-	-	-
<b>Age</b>	<50	18	1.55	0.76-3.17	-	-	-
	50-60	19	0.97	0.49-1.94	-	-	-
	60-70	19	Ref		-	-	-
	>70	11	1.13	0.50-2.54	-	-	-
<b>Children</b>	Yes, home living	17	Ref		-	-	-
	Yes, living away	41	1.13	0.61-2.11	-	-	-
	No	9	0.92	0.38-2.22	-	-	-
<b>Education</b>	Secondary school or lower	22	Ref		-	-	-
	Intermediate vocational training	25	0.72	0.38-1.35	-	-	-
	Higher	19	0.89	0.45-1.76	-	-	-

		vocational training and university				
<b>Work</b>	1	58	Ref	-	-	-
	2	9	0.84	0.39-1.81	-	-
<b>Hospital type</b>	General	32	Ref	-	-	-
	Teaching	33	0.68	0.40-1.16	-	-
	Academic	2	1.13	0.22-5.68	-	-
<b>Type highest operation</b>	Breast	34	Ref	-	-	-
	conserving					
	Amputation	31	1.47	0.86-2.51	-	-
<b>Stage</b>	Unknown	2	2.91	0.51-16.52	-	-
	1	27	Ref	-	-	-
	2	29	1.25	0.70-2.21	-	-
<b>#Comorbidities</b>	3	11	1.94	0.88-4.29	-	-
	0	29	Ref	-	-	-
	1	21	1.07	0.58-1.97	-	-
	2	9	1.69	0.73-3.94	-	-
	$\geq 3$	6	2.18	0.78-6.08	-	-

## Appendix III: Questionnaire



profiel

### Late gezondheidsproblemen na de behandeling van borstkanker

Wij stellen het zeer op prijs als u deze vragenlijst wilt invullen. De vragenlijst is voor vrouwen vanaf 18 jaar die borstkanker gehad hebben. De gegevens worden **vertrouwelijk** en **anoniem** verwerkt, wat betekent dat uw antwoorden niet tot u te herleiden zijn en dat uw gegevens niet aan anderen doorgegeven worden. De vragenlijst dient alleen door de persoon ingevuld te worden aan wie de vragenlijst gericht is.

Het invullen van de vragenlijst duurt ongeveer **30 minuten**. Wanneer het niet lukt om de vragenlijst in één keer in te vullen, adviseren wij u om te pauzeren en later op de dag of uiterlijk de volgende dag verder te gaan met invullen. Het kan ook zijn dat sommige vragen op elkaar lijken, of voor u overbodig lijken of niet op u van toepassing lijken. We hebben de vragenlijst met zorg samengesteld, en we vragen u toch alle vragen beantwoorden. Het is belangrijk dat u de vragenlijst volledig invult: incomplete vragenlijsten kunnen wij helaas niet meenemen in ons onderzoek.

**Wij stellen het op prijs als u de vragenlijst binnen twee weken invult en retour stuurt, samen met een ingevuld toestemmingsformulier. Dit formulier is bijgevoegd aan de vragenlijst.**

Alvast hartelijk dank voor uw medewerking.

Datum:	<input type="text"/> <input type="text"/> - <input type="text"/> <input type="text"/> - <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
Studienummer:	<input type="text"/>

### Invulinstructie

- Vul de vragenlijst in met een zwarte of blauwe pen (geen viltstift).
- Zet een duidelijk kruisje in het antwoordvakje.
- Kruis bij elke vraag één hokje aan. Als meer antwoorden gegeven mogen worden staat dit aangegeven.
- Vul bij een getal één cijfer per vakje in. Het hele cijfer moet binnen het vakje komen.
- Bij sommige vragen mag u zelf tekst invullen. Gelieve zo duidelijk mogelijk en in blokletters.
- Als u één of meerdere vragen over kunt slaan, is dit aangegeven.

## ALGEMEEN

0. Wat is uw geboortedatum?

		/			/	1	9		
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## OVER UW GEZONDHEID

De volgende vragen gaan over hoe u uw gezondheid beoordeelt. Wij zijn hierin geïnteresseerd, omdat we willen weten hoe u zich in het algemeen voelt.

1. Hoe zou u over het algemeen uw gezondheid noemen?

- Uitstekend
- Zeer goed
- Goed
- Matig
- Slecht

Kruis het antwoord aan dat het beste weergeeft hoe juist of onjuist u elk van de volgende uitspraken voor uzelf vindt.

		Volkomen juist	Grotendeels juist	Weet ik niet	Grotendeels onjuist	Volkomen onjuist
2	Ik lijk gemakkelijker ziek te worden dan andere mensen	<input type="checkbox"/>				
3	Ik ben net zo gezond als andere mensen die ik ken	<input type="checkbox"/>				
4	Ik verwacht dat mijn gezondheid achteruit zal gaan	<input type="checkbox"/>				
5	Mijn gezondheid is uitstekend	<input type="checkbox"/>				

6. Hoe beoordeelt u nu uw gezondheid over het algemeen, vergeleken met een jaar geleden?

- Veel beter dan een jaar geleden
- Iets beter dan een jaar geleden
- Ongeveer hetzelfde
- Iets slechter dan een jaar geleden
- Veel slechter dan een jaar geleden

## OVER LICHAMELIJKE AANDOENINGEN EN KLACHTEN

De volgende vragen gaan over de lichamelijke klachten die u nu ervaart, tenzij anders aangegeven.

7.	<b>Heeft u last van één of meerdere van de volgende aandoeningen (meerdere antwoorden mogelijk)?</b> <b>Kruis 'ja' aan indien van toepassing.</b>	<b>Indien u een aandoening heeft, heeft u hiervoor een behandeling voorgeschreven gekregen van uw arts?</b> <b>Kruis 'ja' aan indien van toepassing.</b>	
		<b>Ja</b>	<b>Ja</b>
1.	Een andere vorm van kanker dan borstkanker, of uitzaaiing van borstkanker	<input type="checkbox"/>	<input type="checkbox"/>
2.	Een longziekte (bijv. COPD of astma, transplantatie)	<input type="checkbox"/>	<input type="checkbox"/>
3.	Hart- en vaatziekten (bijv. een infarct, longembolie of TIA)	<input type="checkbox"/>	<input type="checkbox"/>
4.	Een aandoening of klachten aan de maag of darmen (tevens de lever, galblaas en pancreas)	<input type="checkbox"/>	<input type="checkbox"/>
5.	Een aandoening aan de urinewegen of voortplantingsorganen	<input type="checkbox"/>	<input type="checkbox"/>
6.	Een aandoening aan spieren, bindweefsel en/of gewrichten	<input type="checkbox"/>	<input type="checkbox"/>
7.	Een aandoening aan het zenuwstelsel (bijv. dementie, Parkinson, MS, psychiatrisch, ALS)	<input type="checkbox"/>	<input type="checkbox"/>
8.	Een stofwisselings- of stollingsstoornis (bijv. diabetes of stolling van het bloed)	<input type="checkbox"/>	<input type="checkbox"/>
9.	Een infectieziekte (HIV, AIDS, tuberculose, malaria)	<input type="checkbox"/>	<input type="checkbox"/>
10.	Er was <u>geen</u> sprake van bovenstaande aandoeningen of een andere aandoening	<input type="checkbox"/>	<input type="checkbox"/>
11.	Anders, namelijk... (vul hieronder in)	<input type="checkbox"/>	<input type="checkbox"/>
b		<input type="checkbox"/>	<input type="checkbox"/>

8.

Hieronder ziet u een lijst met verschillende gezondheids-klachten. Kruis per klacht 'ja' aan als u hier in het afgelopen jaar last van heeft gehad. En indien 'ja', wilt u ook aangeven of u voor deze klacht een (huis)arts bezocht? Indien niet van toepassing, laat u de vakjes open.

	Heeft u afgelopen jaar last gehad van deze klacht?	Heeft u voor deze klacht afgelopen jaar uw (huis)arts bezocht?
	Ja	Ja
1. Moeheid/verminderd uithoudingsvermogen	<input type="checkbox"/>	<input type="checkbox"/>
2. Buik- of maagklachten	<input type="checkbox"/>	<input type="checkbox"/>
3. Misselijkheid	<input type="checkbox"/>	<input type="checkbox"/>
4. Diarree of verstopping	<input type="checkbox"/>	<input type="checkbox"/>
5. Irritatie aan het oog	<input type="checkbox"/>	<input type="checkbox"/>
6. Oorklachten	<input type="checkbox"/>	<input type="checkbox"/>
7. Hartkloppingen	<input type="checkbox"/>	<input type="checkbox"/>
8. Nek- of schouderklachten	<input type="checkbox"/>	<input type="checkbox"/>
9. Rugklachten	<input type="checkbox"/>	<input type="checkbox"/>
10. Pijn of druk op de borstkas	<input type="checkbox"/>	<input type="checkbox"/>
11. Klachten aan arm/elleboog/hand/pols	<input type="checkbox"/>	<input type="checkbox"/>
12. Een botbreuk	<input type="checkbox"/>	<input type="checkbox"/>
13. Klachten aan been/heup/ knie/voet	<input type="checkbox"/>	<input type="checkbox"/>
14. Spierpijn	<input type="checkbox"/>	<input type="checkbox"/>
15. Hoofdpijn	<input type="checkbox"/>	<input type="checkbox"/>
16. Tintelingen in vingers, voeten of tenen	<input type="checkbox"/>	<input type="checkbox"/>
17. Duizeligheid of licht in het hoofd	<input type="checkbox"/>	<input type="checkbox"/>
18. Angstig/nerveus/gespannen gevoel	<input type="checkbox"/>	<input type="checkbox"/>
19. Depressief gevoel	<input type="checkbox"/>	<input type="checkbox"/>
20. Plotselinge (hevige) stress of crisis	<input type="checkbox"/>	<input type="checkbox"/>
21. Prikkelbaar/boosheid	<input type="checkbox"/>	<input type="checkbox"/>
22. Geheugen- of concentratieproblemen	<input type="checkbox"/>	<input type="checkbox"/>
23. Slaapproblemen	<input type="checkbox"/>	<input type="checkbox"/>
24. Toegenomen gebruik van drank, sigaretten, drugs, slaap- of kalmeringsmiddelen	<input type="checkbox"/>	<input type="checkbox"/>
25. Benauwd of kortademig in rust (zonder inspanning)	<input type="checkbox"/>	<input type="checkbox"/>
26. Hoesten	<input type="checkbox"/>	<input type="checkbox"/>

27.	Klachten aan neus (bijv. vaak niezen, prikkelend gevoel, regelmatig verstopte neus)	<input type="checkbox"/>	<input type="checkbox"/>
28.	Huidproblemen (bijv. jeuk, uitslag of rode vlekken)	<input type="checkbox"/>	<input type="checkbox"/>
29.	Plasproblemen	<input type="checkbox"/>	<input type="checkbox"/>
30.	Problemen met seksualiteit	<input type="checkbox"/>	<input type="checkbox"/>
		Afgelopen jaar last gehad van deze klacht?	Heeft u voor deze klacht afgelopen jaar uw (huis)arts bezocht?
		Ja	Ja
31.	Menopauzale klachten (opvliegers, nachtelijk transpireren, onregelmatig bloedverlies, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
32.	Verandering in gewicht	<input type="checkbox"/>	<input type="checkbox"/>
33.	Overgevoeligheid voor licht of geluid	<input type="checkbox"/>	<input type="checkbox"/>
34.	Pijnklachten/zwelling (incl. littekens) in het borstgebied van de aangedane borst(en)	<input type="checkbox"/>	<input type="checkbox"/>
35.	Overgevoeligheid in het borstgebied van de aangedane borst(en)	<input type="checkbox"/>	<input type="checkbox"/>
36.	Huidklachten in het borstgebied van de aangedane borst(en)	<input type="checkbox"/>	<input type="checkbox"/>
37.	Vervroegde menopauze/onvruchtbaarheid	<input type="checkbox"/>	<input type="checkbox"/>
38.	Klachten aan de oksel (evt door lymfoedeem van de arm/oksel)	<input type="checkbox"/>	<input type="checkbox"/>
39.	Bewegingsbeperking van de arm	<input type="checkbox"/>	<input type="checkbox"/>
40.	Droge mond	<input type="checkbox"/>	<input type="checkbox"/>
41.	Haarverlies	<input type="checkbox"/>	<input type="checkbox"/>
Anders, namelijk: (schrijf klacht hieronder)			
42.		<input type="checkbox"/>	<input type="checkbox"/>
43.		<input type="checkbox"/>	<input type="checkbox"/>
44.		<input type="checkbox"/>	<input type="checkbox"/>

**9. Wat is uw belangrijkste klacht uit bovenstaande lijst?**

Vul het bijbehorende cijfer van de klachten 1 tm 45 uit vraag 8 in

--

Ik heb geen klachten

### **OVER UW KWALITEIT VAN LEVEN**

Wij zijn geïnteresseerd in de gezondheidsproblemen die u ervaart, zowel lichamelijk als mentaal. Wilt u alle vragen zelf beantwoorden door het vakje aan te kruisen dat het meest op u van toepassing is. Er zijn geen ‘juiste’ of ‘onjuiste’ antwoorden. De informatie die u geeft zal strikt vertrouwelijk worden behandeld.

Het kan zijn dat enkele vragen overlappen met eerdere vragen, of dubbelop lijken. Wij willen u verzoeken toch alle vragen in te vullen: alle antwoorden zijn nodig voor ons onderzoek.

#### **10. Kruis steeds het antwoord aan dat het meest op u van toepassing is**

		<b>Helemaal niet</b>	<b>Een beetje</b>	<b>Nogal</b>	<b>Heel erg</b>
1.	Heeft u moeite met het doen van inspannende activiteiten zoals het dragen van een zware boodschappentas of een koffer?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	Heeft u moeite met het maken van een lange wandeling?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	Heeft u moeite met het maken van een korte wandeling buitenshuis?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	Moet u overdag in bed of op een stoel blijven?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	Heeft u hulp nodig met eten, aankleden, uzelf wassen of naar het toilet gaan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Gedurende de afgelopen week:</b>		<b>Helemaal niet</b>	<b>Een beetje</b>	<b>Nogal</b>	<b>Heel erg</b>
6.	Was u beperkt bij het doen van uw werk of andere dagelijkse bezigheden?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	Was u beperkt in het uitoefenen van uw hobby's of bij andere bezigheden die u in uw vrije tijd doet?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.	Was u kortademig?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.	Heeft u pijn gehad?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10.	Had u behoefte om te rusten?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11.	Heeft u moeite met slapen gehad?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12.	Heeft u zich slap gevoeld?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.	Heeft u gebrek aan eetlust gehad?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14.	Heeft u zich misselijk gevoeld?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15.	Heeft u overgegeven?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16.	Had u last van obstipatie? (was u verstopt?)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

17.	Had u diarree?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18.	Was u moe?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19.	Heeft pijn u gehinderd in uw dagelijkse bezigheden?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20.	Heeft u moeite gehad met het concentreren op dingen, zoals een krant lezen of televisie kijken?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21.	Voelde u zich gespannen?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Gedurende de afgelopen week:</b>		<b>Helemaal niet</b>	<b>Een beetje</b>	<b>Nogal</b>	<b>Heel erg</b>
22.	Maakte u zich zorgen?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23.	Voelde u zich prikkelbaar?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24.	Voelde u zich neerslachtig?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25.	Heeft u moeite gehad met het herinneren van dingen?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26.	Heeft uw lichamelijke toestand of medische behandeling uw familieleven in de weg gestaan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27.	Heeft uw lichamelijke toestand of medische behandeling u belemmerd in uw sociale bezigheden?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28.	Heeft uw lichamelijke toestand of medische behandeling financiële moeilijkheden met zich meegebracht?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**11. Hoe zou u uw algehele gezondheid gedurende de afgelopen week beoordelen?**

Kruis het getal tussen 1 en 7 aan dat het meest op u van toepassing is

<input type="checkbox"/>						
1	2	3	4	5	6	7

Erg slecht

Uitstekend

**12. Hoe zou u uw algehele ‘kwaliteit van het leven’ gedurende de afgelopen week beoordelen?**

Kruis het getal tussen 1 en 7 aan dat het meest op u van toepassing is

<input type="checkbox"/>						
1	2	3	4	5	6	7

Erg slecht

Uitstekend

**OVER UZELF EN UW ACHTERGROND**

De volgende vragen gaan over uw achtergrond. Wij zijn hierin geïnteresseerd, zodat we uw antwoorden in de juiste context kunnen plaatsen. Wilt u alle vragen beantwoorden?

**13. Wat is het hoogste opleidingsniveau dat u heeft afgerond?**

- Lager onderwijs (of minder)
- Voortgezet onderwijs, of gelijkwaardig
- Middelbaar (beroeps-) onderwijs, of gelijkwaardig
- Universiteit, Hoger (beroeps-) onderwijs, of gelijkwaardig

**14. Heeft u een partner?**

- Ja, ik heb een partner
- Nee, ik heb geen partner

**15. Heeft u kinderen?**

- Ja, ik heb thuiswonende kinderen
- Ja, maar zij wonen niet (meer) thuis
- Nee, ik heb geen kinderen

**16. Welke omschrijving is op dit moment het meest op u van toepassing? (één antwoord aankruisen) Ik ben/heb:**

- Schoolgaand/studerend
- Betaald werk (loondienst of zelfstandig ondernemer)
- Werkloos/werkzoekend (geregistreerd bij het UWV)
- Arbeidsongeschikt/WAO
- Huisvrouw
- Pensioen (AOW, VUT, enz.)

**17. Bent u momenteel nog onder behandeling voor borstkanker?**

- Nee, ik ben klaar met mijn behandeling voor borstkanker
- Ja, ik krijg nog hormoontherapie
- Ja, ik krijg nog andere therapie, namelijk...

Dit is het einde van de vragenlijst. Wij danken u hartelijk voor het invullen ervan. Controleer alstublieft of u geen vragen heeft overgeslagen.

**Wilt u de vragenlijst alstublieft binnen twee weken retourneren in de bijgevoegde antwoordenv envelop?**

Hieronder kunt u alles vermelden wat u nog kwijt wilt, wat u van deze vragenlijst vond en wat eventueel nog over het hoofd is gezien.



**Heeft u nog vragen, dan kunt een mail sturen naar [k.deligt@iknl.nl](mailto:k.deligt@iknl.nl) (junior onderzoeker IKNL). Bent**