

Supplementary Tables and Figures

Cross-sectional and longitudinal associations of adherence to WCRF/AICR cancer prevention recommendations with health-related quality of life in breast cancer survivors. Health-EpiGEICAM study

Table 1. Operationalizing, scoring and description of adherence to 2018 WCRF/AICR Recommendations in breast cancer survivors, at diagnosis and 7-12 years later.

Figure 1. Cross-sectional linear associations of adherence to WCRF/AICR recommendations with HRQL physical and mental domains at diagnosis of breast cancer by subgroup.

Figure 2. Longitudinal linear associations of changes in adherence to WCRF/AICR recommendations with changes in HRQL physical and mental domains 7–12 years after diagnosis of breast cancer by subgroup.

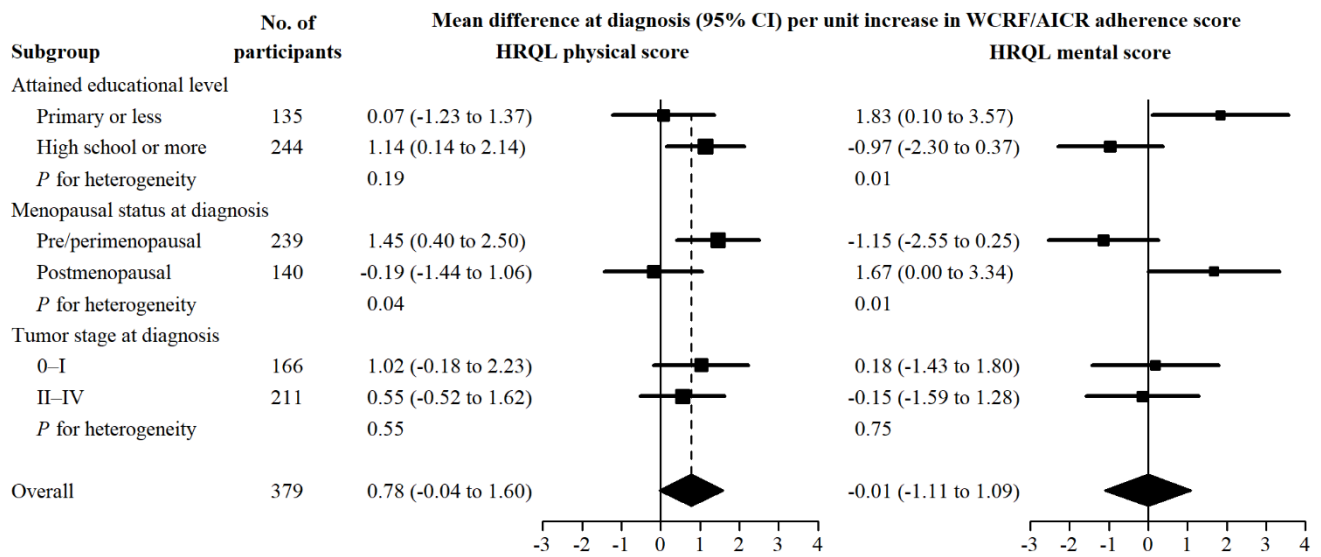
Table 2. Baseline sociodemographic, lifestyle and clinical characteristics of the participants and non-participants in the Health-EpiGEICAM study.

Table 1. Operationalizing, scoring and description of adherence to 2018 WCRF/AICR Recommendations in breast cancer survivors, at diagnosis and 7-12 years later

2018 WCRF/AICR Recommendations	Operationalization	Points	At diagnosis		7-12 years after diagnosis	
			N	(%)	N	(%)
1. Be a healthy weight	BMI (kg/m ²):					
	18.5–24.9	1	207	(54.6)	167	(45.0)
	25–29.9	0.5	117	(30.9)	137	(36.9)
	<18.5 or ≥30	0	55	(14.5)	67	(18.1)
2. Be physically active	Total moderate-vigorous physical activity (min/wk):					
	≥300	1	186	(49.1)	138	(37.2)
	150–<300	0.5	48	(12.7)	104	(28.0)
	<150	0	145	(38.3)	129	(34.8)
3. Eat a diet rich in wholegrains, vegetables, fruit and beans	Fruits and vegetables (g/day):					
	≥400	0.5	258	(68.1)	278	(74.9)
	200–<400	0.25	87	(23.0)	70	(18.9)
	<200	0	34	(9.0)	23	(6.2)
	Total fiber (g/day):					
	≥30	0.5	46	(12.1)	53	(14.3)
4. Limit consumption of “fast foods” and other processed foods high in fat, starches or sugars	Percent of total kcal from ultra-processed foods (aUPFs) ^a :					
	Tertile 1	1	126	(33.3)	259	(69.8)
	Tertile 2	0.5	124	(32.7)	75	(20.2)
	Tertile 3	0	129	(34.0)	37	(10.0)
5. Limit consumption of red and processed meat	Total red and processed meat (g/wk):					
	Red meat <500 and processed meat <21	1	18	(4.8)	35	(9.4)
	Red meat <500 and processed meat 21–<100	0.5	102	(26.9)	124	(33.4)
	Red meat ≥500 or processed meat ≥100	0	259	(68.3)	212	(57.1)
6. Limit consumption of sugar-sweetened drinks	Total sugar-sweetened drinks (g/day):					
	0	1	106	(28.0)	200	(53.9)
	>0–≤250 (8.5 oz)	0.5	239	(63.1)	160	(43.1)
	>250 (8.5 oz)	0	34	(9.0)	11	(3.0)
7. Limit alcohol consumption	Total ethanol (g/day):					
	0	1	109	(28.8)	99	(26.7)
	≤14 (1 drink)	0.5	224	(59.1)	239	(64.4)
	>14 (1 drink)	0	46	(12.1)	33	(8.9)

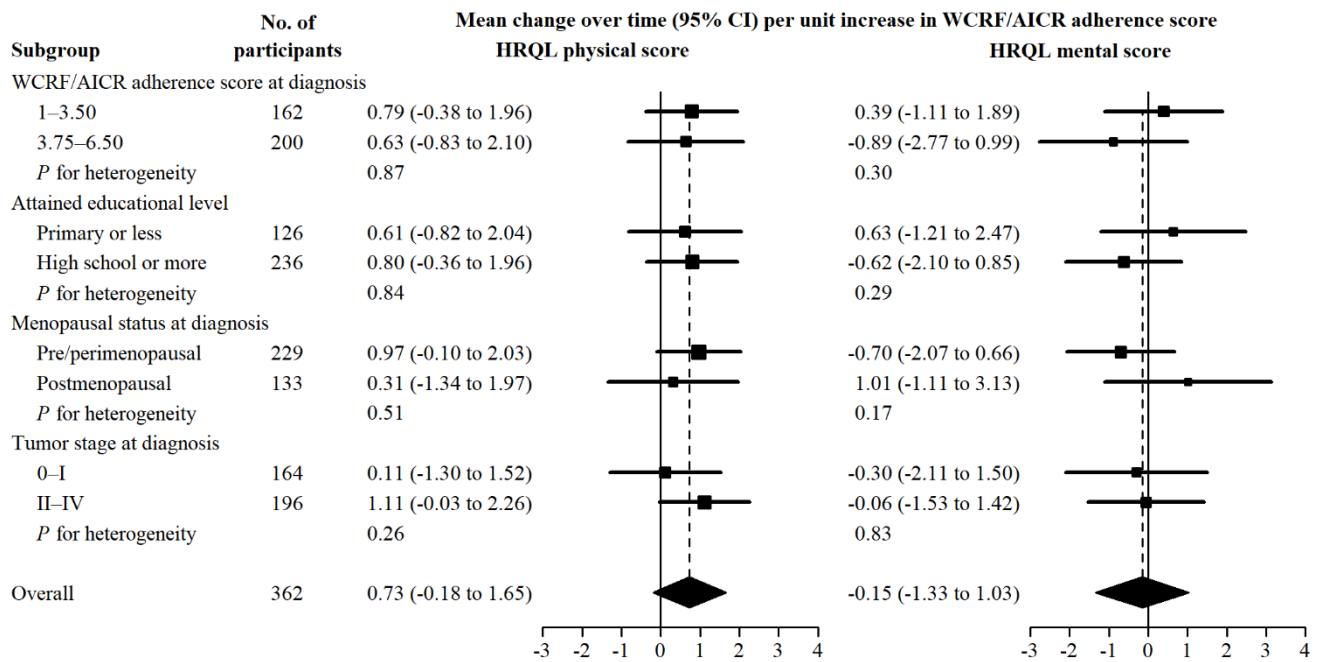
^a Based on the tertiles of the basal distribution

Figure 1. Cross-sectional linear associations of adherence to WCRF/AICR recommendations with HRQL physical and mental domains at diagnosis of breast cancer by subgroup.



Subgroup-specific mean differences in HRQL scores at diagnosis (squares with area inversely proportional to the variance) and their 95% CIs (horizontal lines) per unit increase in WCRF/AICR adherence score at diagnosis were obtained from linear mixed models with interactions between subgroup indicators and linear term of WCRF/AICR adherence score at diagnosis, random between-participant variations in HRQL scores at diagnosis, and adjusted for recruitment region, attained educational level, parity, tumour receptor status at diagnosis, menopausal status at diagnosis, age, partner status, working status, smoking status, total energy intake, number of comorbidities, family history of breast cancer, tumour stage, breast surgery, chemotherapy, radiotherapy, and hormone therapy. CI, confidence interval; HRQL, health-related quality of life; WCRF/AICR, World Cancer Research Fund/American Institute for Cancer Research.

Figure 2. Longitudinal linear associations of changes in adherence to WCRF/AICR recommendations with changes in HRQL physical and mental domains 7–12 years after diagnosis of breast cancer by subgroup.



Subgroup-specific mean changes in HRQL scores over time (squares with area inversely proportional to the variance) and their 95% CIs (horizontal lines) per unit increase in WCRF/AICR adherence score over time were obtained from linear mixed models with interactions between subgroup indicators and linear term of changes in WCRF/AICR adherence score over time, random between-participant variations in both HRQL scores at diagnosis and HRQL changes over time, and adjusted for WCRF/AICR adherence score at diagnosis (continuous), recruitment region, attained educational level, parity, menopausal status at diagnosis, tumour receptor status at diagnosis, tumour stage at diagnosis, basal and changes over time in age, partner status, working status, smoking status, total energy intake, number of comorbidities, family history of breast cancer, breast surgery, chemotherapy, radiotherapy, hormone therapy, targeted therapy, lymphedema, and recurrent or new primary breast cancer. CI, confidence interval; HRQL, health-related quality of life; WCRF/AICR, World Cancer Research Fund/American Institute for Cancer Research.

Table 2. Baseline sociodemographic, lifestyle and clinical characteristics of the participants and non-participants in the Health-EpiGEICAM study.

Characteristics at diagnosis	Non-participants (N=361) n(%)	Participants (N=406) n(%)	<i>p</i> -value
Age, mean (SD)	52.1 (10.2)	49.1 (8.7)	<0.001
BMI (kg/m ²)	26.4 (4.9)	25.1 (4.2)	0.001
Attained educational level			
Primary or less	171 (52.6)	152 (37.4)	<0.001
High school	79 (24.3)	131 (32.3)	
University	75 (23.1)	123 (30.3)	
Partner status			
With partner	202 (69.4)	320 (79.4)	0.003
Without partner	89 (30.6)	83 (20.6)	
Working status			
Not working	145 (74.7)	136 (33.5)	<0.001
working	49 (25.3)	270 (66.5)	
Smoking status			
Non-smoker/former \geq 12 months	194 (67.6)	283 (69.9)	0.523
Smoker/former <12 months	93 (32.4)	122 (30.1)	
Energy intake kcal/d, mean (SD)	1975.1 (1156.7)	1937.5 (600.2)	0.164
Parity			
Parous	273 (82.2)	338 (83.3)	0.714
Nulliparous	59 (17.8)	68 (16.7)	
Family history of breast cancer			
No	216 (74.0)	291 (71.7)	0.542
Second degree only	40 (13.7)	53 (13.1)	
First degree	36 (12.3)	62 (15.3)	
No. of comorbidities			
0	150 (51.4)	257 (63.3)	0.002
1	75 (25.7)	93 (22.9)	
\geq 2	67 (22.9)	56 (13.8)	
Menopausal status			
Pre/perimenopausal	135 (46.2)	250 (61.6)	<0.001
Postmenopausal	157 (53.8)	156 (38.4)	
Tumour receptor status ^a			
HR+ and HER2-	181 (62.2)	284 (70.0)	0.017
HER2+	77 (26.5)	71 (17.5)	
Triple negative	33 (11.3)	51 (12.6)	
AJCC tumour stage at diagnosis ^b			
0-I	118 (34.7)	177 (43.9)	<0.001
II	132 (38.8)	171 (42.4)	
III-IV	90 (26.5)	55 (13.6)	

AJCC, American Joint Committee on Cancer; BMI, body mass index; HER2, human epidermal growth factor receptor 2; HR, hormone receptor