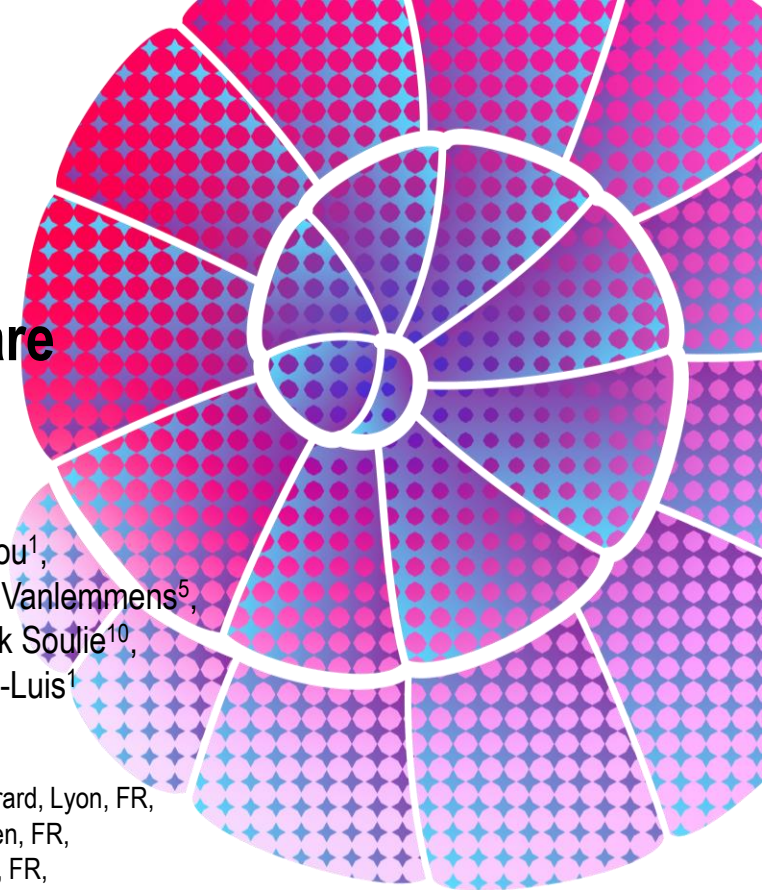


# ESMO BREAST CANCER VIRTUAL MEETING

## Use of Physical Activity and Supportive Care among patients with early Breast Cancer reporting Cancer-Related Fatigue

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# DISCLOSURES

**Antonio Di Meglio**

Honoraria from Thermo Fisher Scientific

# RATIONALE AND STUDY AIM

- . Cancer-related fatigue (CRF) is extremely prevalent among breast cancer survivors, and many of them describe CRF as severe<sup>1</sup>
- . CRF has multiple domains -**physical, emotional and cognitive**- and generates considerable distress and impact on quality of life<sup>2</sup>
- . Management of CRF includes (NCCN, ASCO, ESMO Guidelines):
  - . Regular screening and assessment of CRF, patient education<sup>3</sup>
  - . Maintaining adequate **Physical Activity** (PA) levels<sup>4,5</sup>
  - . Other **Supportive Care** options:
    - . Psychosocial interventions (eg, cognitive-behavioral or psycho-education targeting non-adaptive thoughts)<sup>6</sup>
    - . Mind-body intervention techniques (eg, acupuncture)<sup>7</sup>
  - . No data showing benefits of homeopathy for CRF
- . **Study aim:** to describe the use of approaches that can help reduce CRF among patients with early-stage breast cancer that have completed primary cancer treatment

# METHODS – STUDY POPULATION



## CANTO (CANCer TOxicities; NCT01993498)

- prospective longitudinal cohort started in 2012
- **26 French comprehensive cancer centers**
- dedicated **national network** sponsored by UNICANCER
- reached inclusion of **12012** patients in 2018

### Inclusion criteria

- 18+ years old at breast cancer diagnosis
- Histologically confirmed invasive breast cancer
  - **Stage I-II-III**
- Untreated at time of inclusion (including primary surgery)

### Exclusion criteria

- Stage IV
- Local recurrence of BC
- History of other cancer within 5 years prior to study
- Receipt of BC treatment prior to study entry

	Baseline	Follow-up after treatment					Long-term follow-up yearly for 5 years
Collected Information	Diagnosis	3-6 months	12 months	24 months	36 months	60 months	
Inclusion criteria							Prolonged and long-term toxicity Survival Outcomes
Signed informed consent							
Clinical examination <sup>^</sup>							
Blood tests							
Paraclinical examination							
Questionnaires (PROs)*							
Biological samples							

**ESMO BREAST CANCER**  
VIRTUAL MEETING



Completion of primary treatment  
(surgery, chemo-, or radio-therapy)

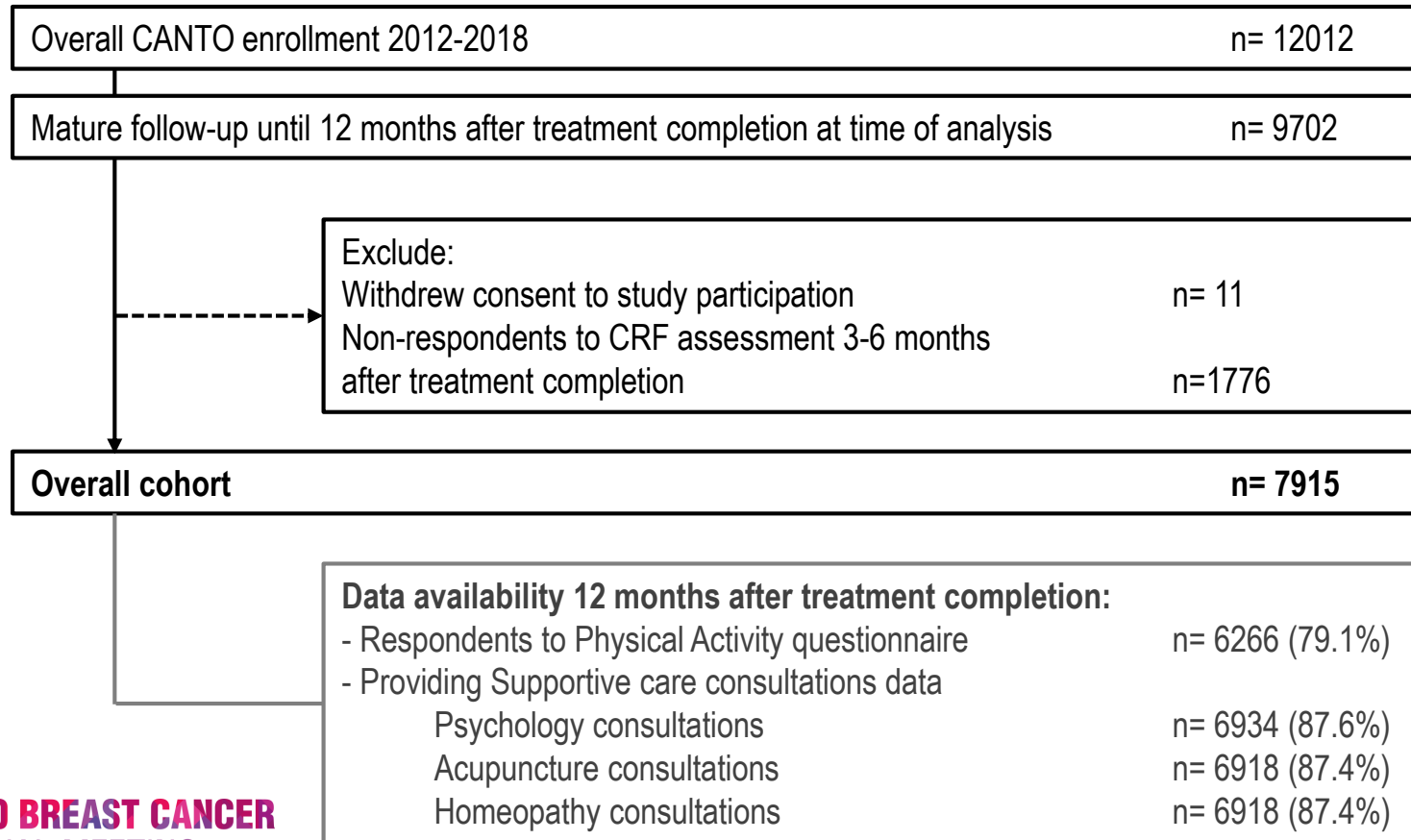
<sup>^</sup>Includes detailed assessment of supportive care consultations

\*EORTC-QLQ C30, B23, FA12, GPAQ-16, HADS, SF-12, IOCv2, social and financial reports

# METHODS – STATISTICAL ANALYSIS

- **Outcomes of interest: PA and Supportive Care between 3-6 months and 12 months after treatment completion**
  - 1- **PA behavior:** maintaining or increasing activity above recommended levels ( $\geq 10$  MET-hours/week<sup>1</sup>) vs. reducing activity below recommendations or remaining insufficiently active ( $< 10$  MET-hours/week); Global Physical Activity Questionnaire (GPAQ)-16
  - 2- **Supportive Care consultations:** consulting a psychologist, acupuncturist or homeopath vs. not
- **Independent variable: CRF assessed 3-6 months after treatment completion**
  - 1- **Global CRF:** European Organization for Research and Treatment of Cancer (EORTC) Quality of Life Questionnaire (QLQ)-C30
  - 2- **CRF Physical, Emotional, and Cognitive domains:** EORTC QLQ-FA12
- **Covariates:**
  - 1- **Assessed at breast cancer diagnosis (inclusion):** age, comorbidities, education, income, centre volume, breast cancer subtype and stage, breast and axillary surgery, receipt of chemotherapy
  - 2- **Assessed 3-6 months after treatment completion** Body Mass Index (BMI), anxiety and depression
- **Statistical analysis:** Multivariable logistic regression assessed odds of using PA and Supportive Care consultation by CRF status:
  - i) **Primary analysis-** Severe CRF (EORTC QLQ score  $\geq 40/100^2$ ) vs. not; ii) **Sensitivity analysis-** CRF as a continuous variable

# RESULTS – STUDY COHORT



# RESULTS – SELECT COHORT CHARACTERISTICS BY GLOBAL CRF

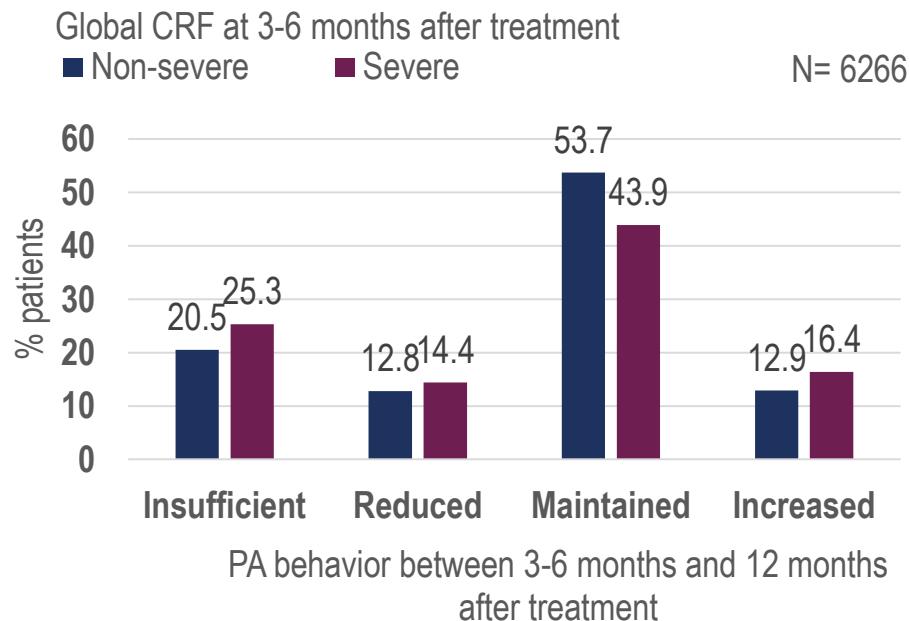
Characteristic N= 7915	Non-severe CRF group N= 5038 (63.6%)	Severe CRF group N= 2877 (36.3%)	p*
Mean Age, years (SD)	57.2 (11.1)	54.4 (11.2)	<.0001
Mean BMI (Kg/m <sup>2</sup> ) (SD)	25.7 (5.1)	26.6 (5.9)	<.0001
Anxiety case	12.5%	34.2%	<.0001
Depression case	1.9%	15.5%	<.0001
Charlson score ≥1	18.4%	21.3%	0.003
Household income ≥3000 €/month	44.2%	38.2%	<.0001
Stage III BC	9.4%	11.2%	<.0001
Mastectomy	25.5%	28.1%	0.010
Axillary dissection	35.9%	41.2%	<.0001
Receipt of chemotherapy	49.5%	58.0%	<.0001

# RESULTS – PA AND SUPPORTIVE CARE CONSULTATIONS OVERALL

PA and supportive care between 3-6 and 12 months after treatment	
Overall N= 7915	(%)
<b>PA</b>	
Insufficient activity (always <10*)	22.2%
Reduced activity (from $\geq 10$ to <10)	13.4%
Maintained activity (always $\geq 10$ )	50.2%**
Increased activity (from <10 to $\geq 10$ )	14.2%**
**Adherent to WHO recommendations on PA	
<b>Supportive care</b>	
Psychology consultations	9.8%
Acupuncture consultations	7.7%
Homeopathy consultations	7.5%



# RESULTS – PA BEHAVIOR BY GLOBAL CRF



**Maintaining or increasing PA  
above recommended levels ( $\geq 10$  MET-hours/week)**

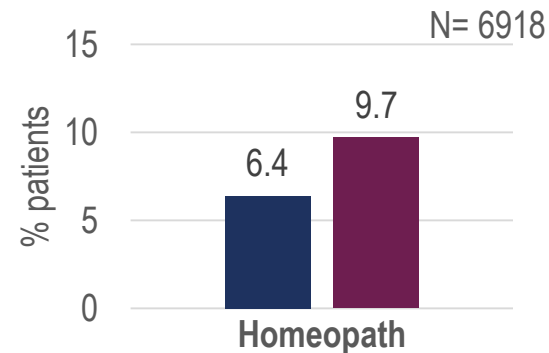
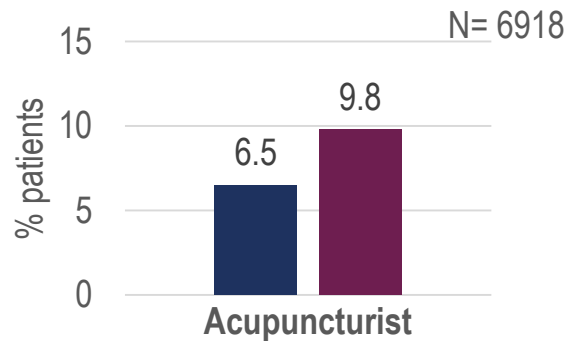
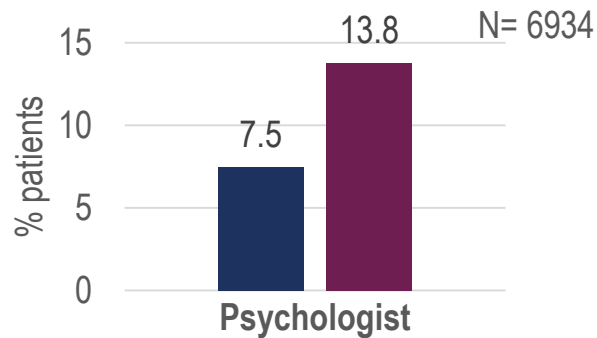
Adjusted\* Odds Ratio (aOR),  
(95% Confidence Interval [CI])

**0.82 (0.72-0.94)**  
p= 0.0037

# RESULTS – SUPPORTIVE CARE BY GLOBAL CRF

Global CRF at 3-6 months after treatment

■ Non-severe ■ Severe



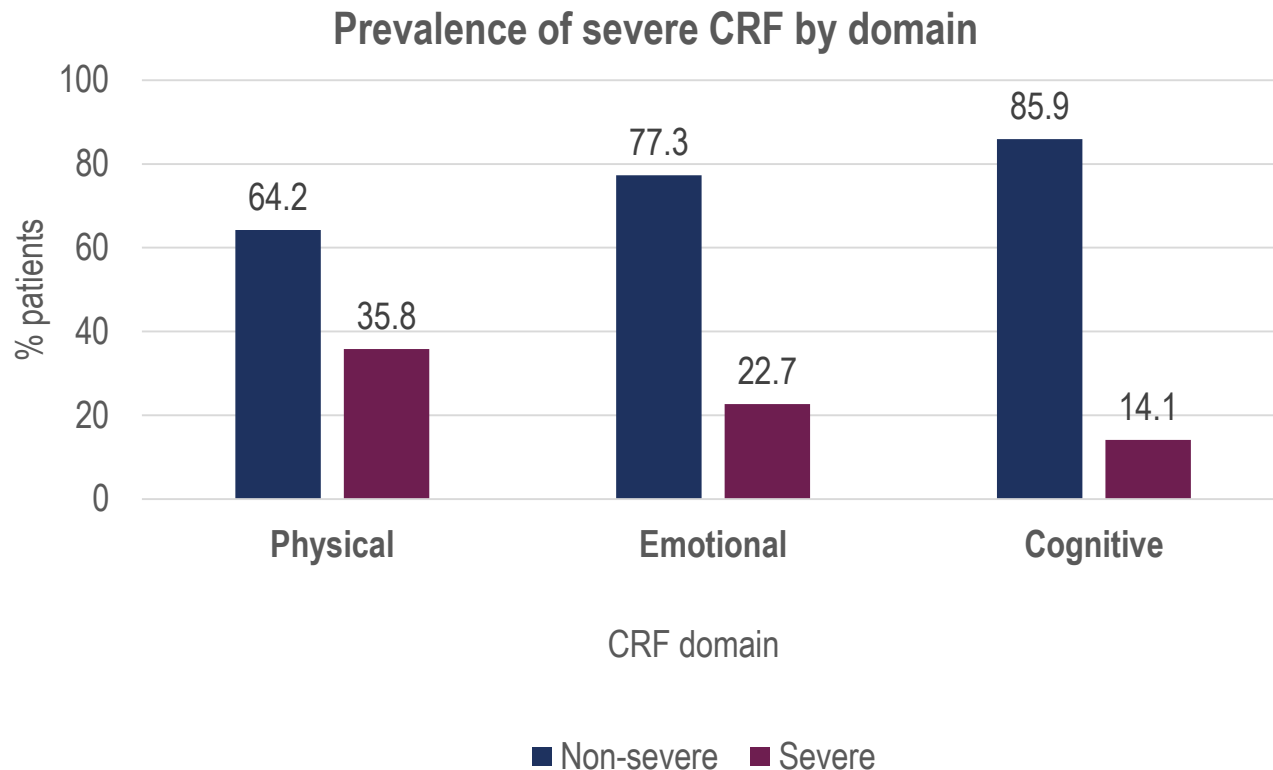
Supportive care consultations between 3-6 months and 12 months after treatment

aOR* (95% CI)	1.31 (1.07-1.59) p= 0.008
Times consulted Mean (SD)	9 (14) vs. 7 (9) p= 0.424

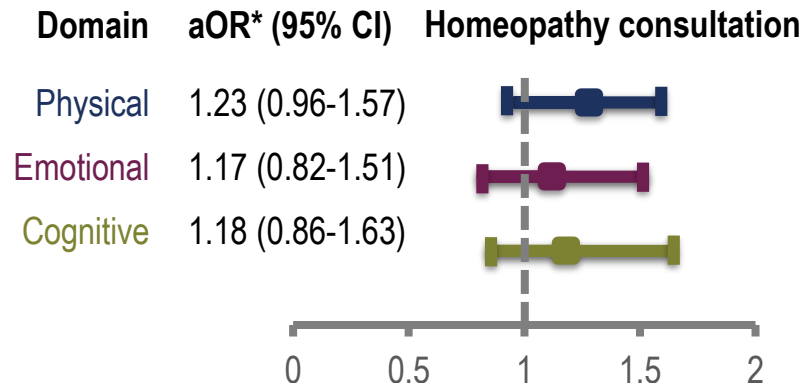
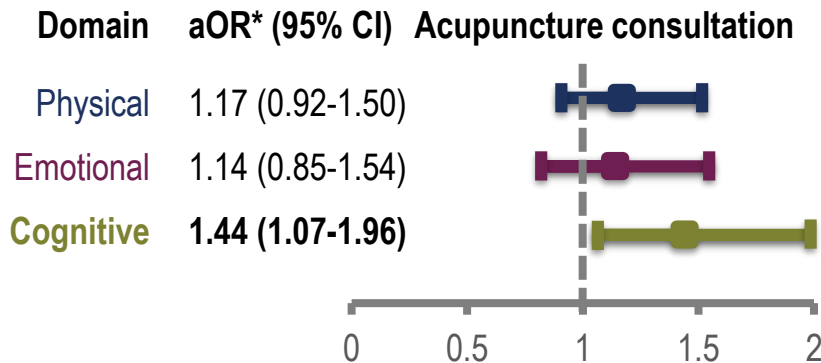
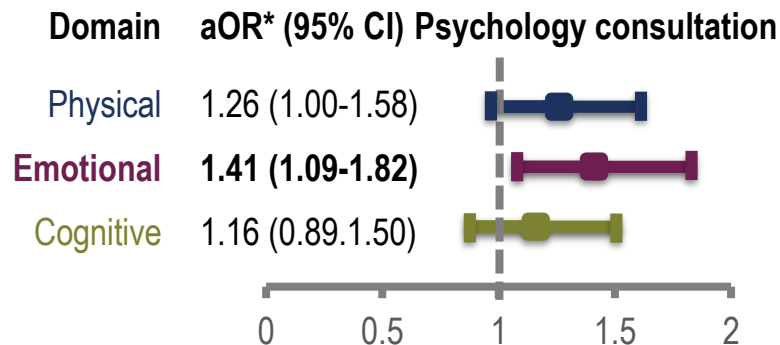
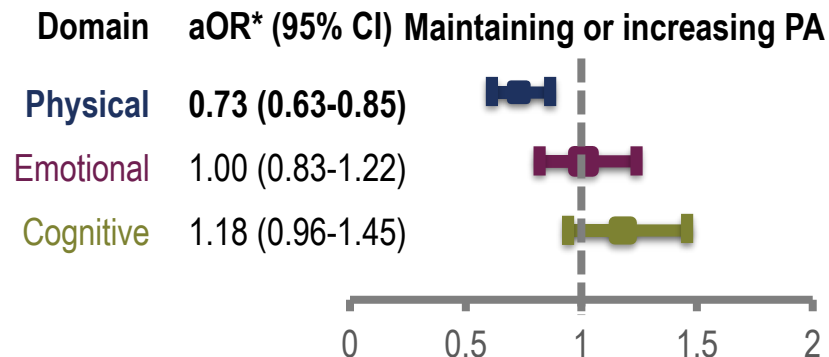
aOR* (95% CI)	1.50 (1.21-1.86) p= 0.0002
Times consulted Mean (SD)	5 (6) vs. 5 (7) p= 0.556

aOR* (95% CI)	1.55 (1.25-1.92) p<.0001
Times consulted Mean (SD)	3 (4) vs. 3 (4) p= 0.756

# RESULTS – CRF DOMAINS



# RESULTS – PA AND SUPPORTIVE CARE BY CRF DOMAIN



# RESULTS – SENSITIVITY ANALYSES: CRF AS CONTINUOUS

CRF domain	Mean score (SD)
Global	36.2 (25.7)
Physical	33.2 (24.3)
Emotional	23.3 (26.5)
Cognitive	18.0 (23.5)

Associations between CRF score, PA, and Supportive Care consultations; aOR* (95% CI)				
CRF domain	Maintaining or increasing PA	SC consultations		
		Psychologist	Acupuncturist	Homeopath
Global	0.996 (0.993-0.998)	1.009 (1.005-1.013)	1.005 (1.000-1.011)	1.011 (1.009-1.014)
Physical	0.993 (0.983-0.996)	1.005 (1.000-1.011)	1.005 (0.999-1.011)	1.011 (1.008-1.015)
Emotional	1.00 (0.996-1.004)	1.006 (1.001-1.012)	1.003 (0.997-1.009)	1.001 (0.997-1.004)
Cognitive	1.005 (1.001-1.008)	1.004 (0.999-1.008)	1.003 (0.997-1.009)	0.999 (0.996-1.002)

# STUDY LIMITATIONS

- . Self-reported assessment of PA behavior (recall bias, risk of overestimation)
- . Reason for consultation of supportive care specialist not collected; non-exhaustive information about all types of supportive care used
- . Cut-off for severe CRF ( $\geq 40/100$ ) was validated for EORTC QLQ-C30, but not for CRF domains of EORTC QLQ-FA12
- . Longitudinal nature of CANTO leads to some attrition over time (missing rates higher at later time points)

# CONCLUSIONS

- **More than 1/3 patients** report severe global CRF 3-6 months post-treatment
- There is a relatively high rate of patients **not meeting PA recommendations** after treatment completion (>35%). Patients **reporting CRF seem less likely** to adhere to PA recommendations (aOR 0.82)
- Use of supportive care is **generally low** (7-10%). Severe CRF is associated **with higher odds of supportive care consultations**, but these were similar across practitioner types (aOR: psychologist 1.31, acupuncturist 1.50, homeopath 1.55)
- There are differences in use of PA and supportive care consultations **by CRF domain**: severe physical CRF is associated with lower adherence to PA (aOR 0.73), and emotional CRF is positively associated with psychology consultations (aOR 1.41)
- Use of some available strategies and uptake of recommendations to manage of CRF **seems suboptimal** among patients with early-stage breast cancer reporting CRF
- Lack of knowledge or resources and stigmatization regarding specific recommendations (eg, referral to a psychologist) may be partly responsible of these findings in a large contemporary cohort of cancer survivors

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## **ALL PATIENTS THAT PARTICIPATED IN CANTO**