

# Structured exercise improves fatigue and health-related quality of life in patients with metastatic breast cancer



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## PROBLEM

Exercise has been proven safe and effective for patients with breast cancer in the curative setting. However, evidence is scarce for patients with metastatic breast cancer (mBC), where cumulative symptom burden is common.

The aim of the PREFERABLE - EFFECT study (NCT04120298) was to evaluate the effects of a structured exercise program on fatigue, health-related quality of life (HRQoL), and other cancer- and treatment-related side effects in patients with mBC.

## METHODS

**Study design:** multinational RCT (Fig 1).

**Study population:** patients with mBC, life expectancy  $\geq 6$  months, ECOG  $\leq 2$ , without unstable bone metastases.

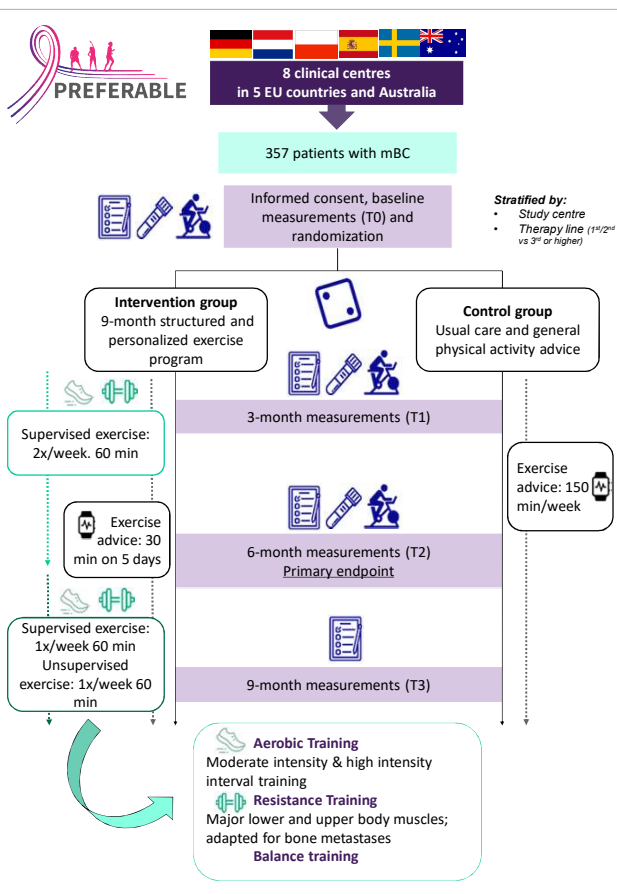
**Outcome measurements at baseline, 3-, 6-, and 9-months:** fatigue (EORTC QLQ-FA12 scale), HRQoL (EORTC QLQ-C30), breast cancer-specific concerns (EORTC QLQ-BR45) and others (not presented here). Primary outcomes assessed a 6-months: EORTC QLQ-FA12 physical fatigue and EORTC QLQ-C30 summary score.

## RESULTS

A total of **357 patients** were randomized (EX=178, UC=179). At 6-months, 18% discontinued the study (44% due to death).

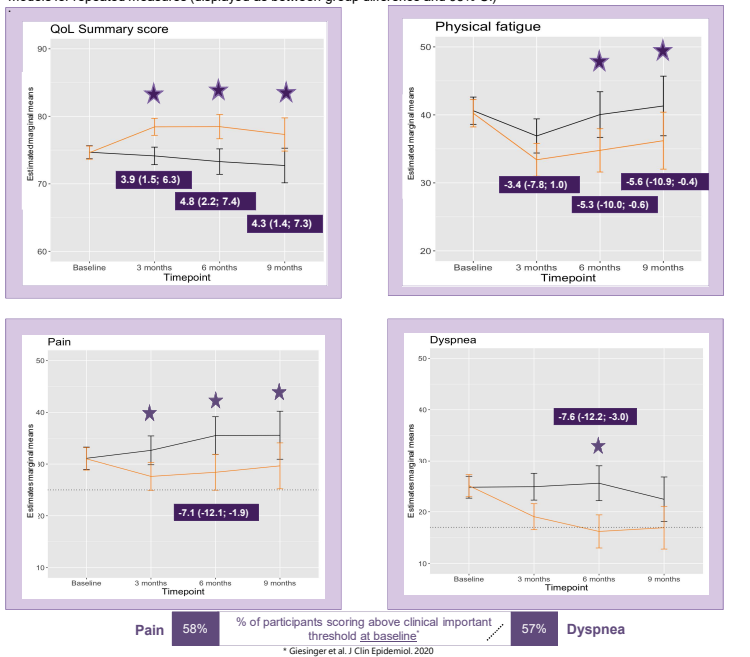
On average, participants were 55.4 years of age (SD=11.1), 74.8% were on their 1st or 2nd line of treatment and **67.2% had bone metastases**.

The median (IQR) **exercise attendance rate was 77% (48.92)**. Two severe adverse events occurred, one wrist and one sacral stress fracture, neither related to bone metastases.



## Exercise effects on HRQoL, physical fatigue, pain, dyspnea and breast cancer-specific concerns

Changes from baseline to 3, 6 and 9 months were compared between groups using mixed models for repeated measures (displayed as between-group difference and 95% CI)



Outcome	Timepoint	Mean between-group difference (95% CI)	Effect Size
Sexual functioning	6 months	5.6 (1.9, 9.4) **	0.28
	9 months	4.5 (0.7, 8.3) *	0.23
Sexual enjoyment	6 months	3.5 (-4.4, 11.3)	0.14
	9 months	7.3 (-0.9, 15.6)	0.29
Endocrine sex. symptoms	6 months	-7.1 (-11.6, -2.5) **	0.25
	9 months	-4.3 (-9.0, 0.4)	0.15

Figure 1. Design of the PREFERABLE-EFFECT study.

## CONCLUSION

This large multinational study is the first adequately powered RCT to investigate the effects of exercise in patients with mBC. It demonstrates that supervised exercise improves fatigue, HRQoL, and other clinically relevant outcomes, such as pain, dyspnea and sexual functioning, in patients with mBC. **Based on these findings, supervised exercise should be recommended to patients with mBC.**

## INTERNATIONAL PARTNERS



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In Australia, participants were recruited from: