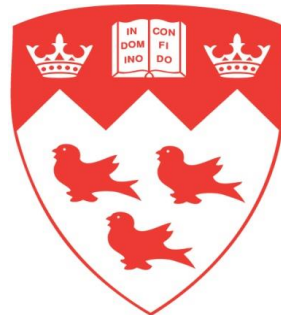# A comparison of the effects of medical Qigong and standard exercise therapy on symptoms and quality of life in patients with advanced cancer

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Exercise types

Standard Exercise Training (SET):

- Uses a combination of endurance and strength training
- Programs are organized individually or in groups
- **Aim:** to improve cardiovascular function + strength

Qigong (QG):

- QG is a popular Traditional Chinese Medicine (TCM) technique
- QG combines slow physical movements, either seated or walking, with controlled breathing and visualisation techniques
- **Aim:** to promote health and well-being

- ➢ Training in both these exercise types is available at our hospital centre

The Study

- **Purpose**: to compare the **efficacy** of **QG** and **SET** in**:**
  - Reducing anxiety and depression
  - Improving symptoms and quality of life
  - Improving physical functioning

- **Design**: Prospective randomized cross-over study

- **Patients:** Adults**,** advanced stage (3 or 4) lung (NSCLC) and gastrointestinal (GI) cancers receiving or eligible for chemotherapy, Performance status* (0-2), life expectancy >4months

- **Outcomes:**
  - Anxiety and depression: Hospital Anxiety Depression Scale (HADS)
  - Symptoms: Edmonton Symptom Assessment scale (ESAS)
  - Quality of life: Functional assessment of cancer therapy (FACT-G)
  - Physical function: 6-minute walk test, sit-to-stand, 50-ft speed walk

* Eastern Cooperative Oncology Group Scale

Study Design

2 weeks

Randomization

QG

QG

SET

SET

BL **6 weeks** T1 **6 weeks** T2
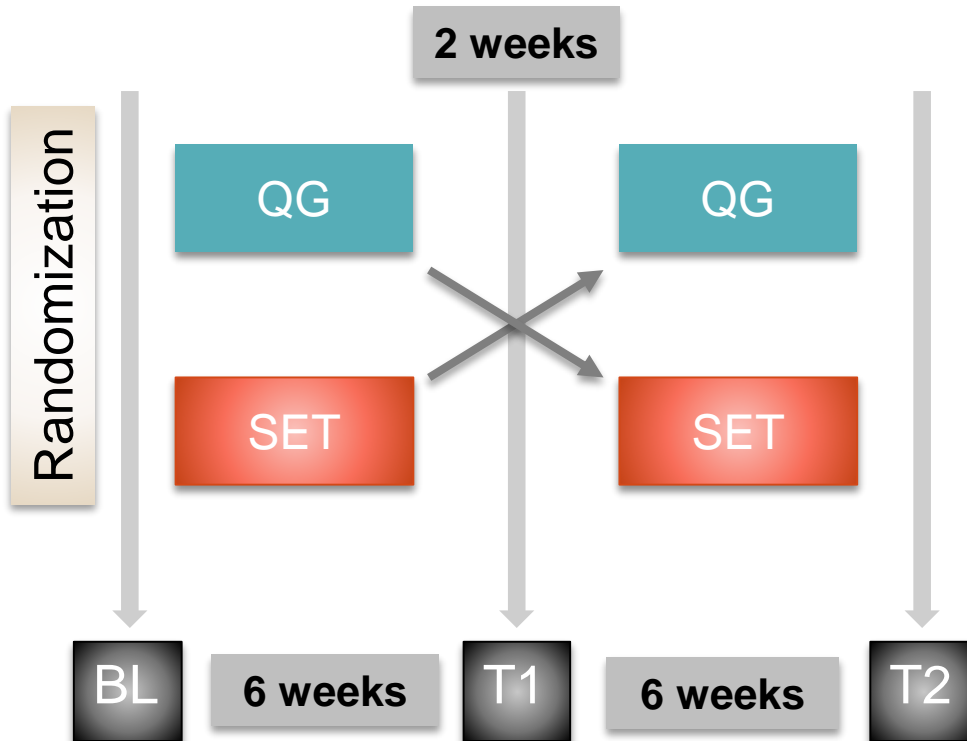
Exercise programs:
- Twice per week for 6 weeks
- Each session 60-90 min
- All training performed in same location by same physiotherapist for all patients
- Minimum 2 week break between first and second exercise intervention

Assessments:
- Evaluator was blinded to patient exercise type

	Exercise Intervention			
	QG	SET	P_{Exer}	P_{Order}
	mean(SD) change			
Psychological function (HADS)				
Anxiety	-0.3(1.9)	-0.3(2.2)	1.00	0.13
Depression	0.5(3.3)	-1.1(2.0)	0.18	0.09
Symptoms (ESAS)				
Poor sleep	0.2(2.7)	-1.4(2.8)	0.11	**0.02**
Impaired Well-being	1.8(2.8)	-0.9(3.0)	0.10	0.36
Pain	0.5(2.2)	0.1(2.7)	0.67	**0.03**
Weakness	0.8(2.4)	-0.6(2.2)	**0.05**	0.21
Anorexia	0.6(2.1)	-0.2(3.5)	0.50	0.42
Breathlessness	0.1(1.7)	-0.3(2.8)	0.61	**0.003**
Depression	-0.1(2.0)	0.2(1.9)	0.78	0.22
Nervousness	0.3(2.2)	-0.6(1.6)	0.34	0.56
Quality of life (FACT)				
Total	-0.6(8.9)	1.2(7.8)	0.70	**0.01**
Physical function				
6MWT (m)	-36.4(54.4)	29.2(81.4)	**0.02**	**0.008**
Speed Walk (s)	-0.1(0.9)	-0.4(1.8)	0.90	0.37
Sit-to-Stand (s)	-0.3(0.5)	0.1(0.8)	0.16	0.17

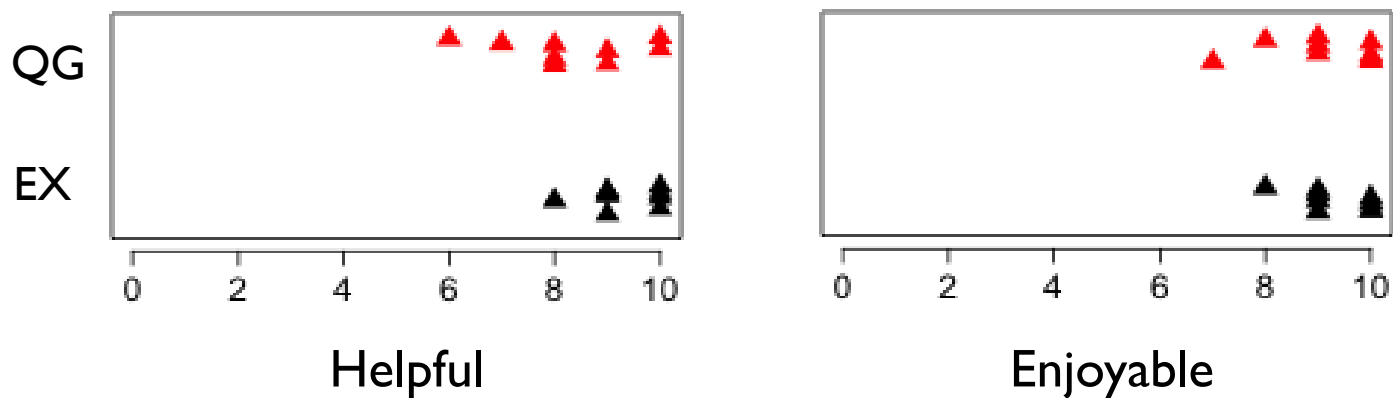Reduction = better

Reduction = better

Increase = better

6-minute Walk Test Results
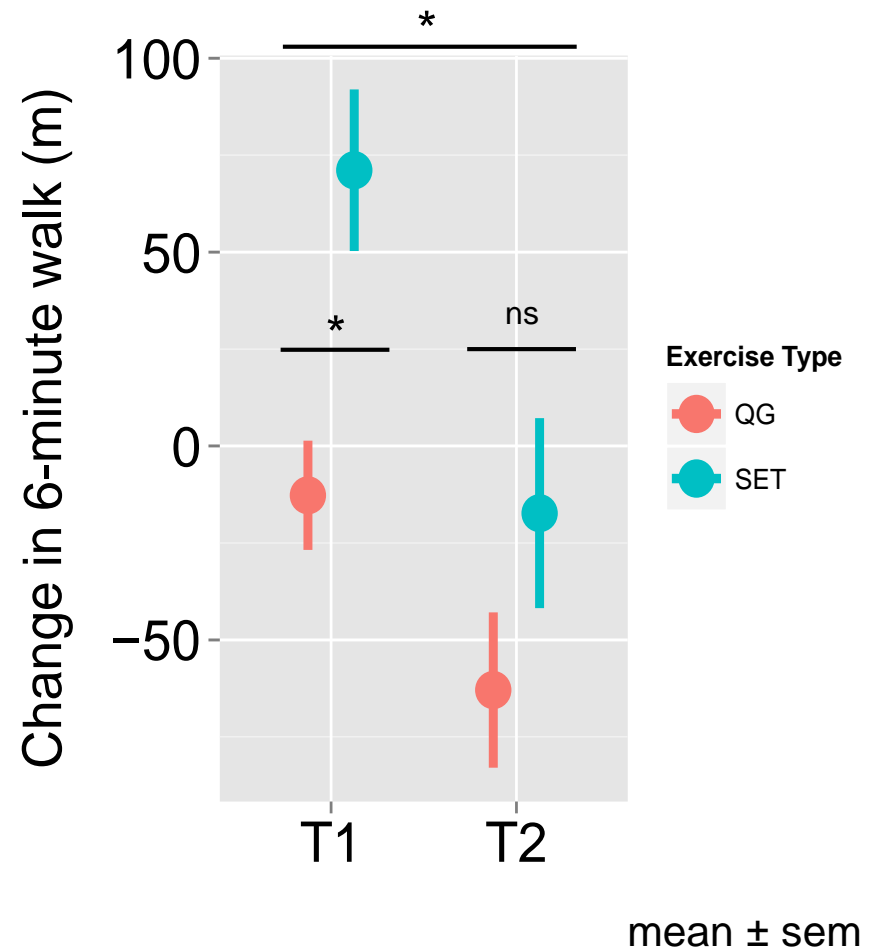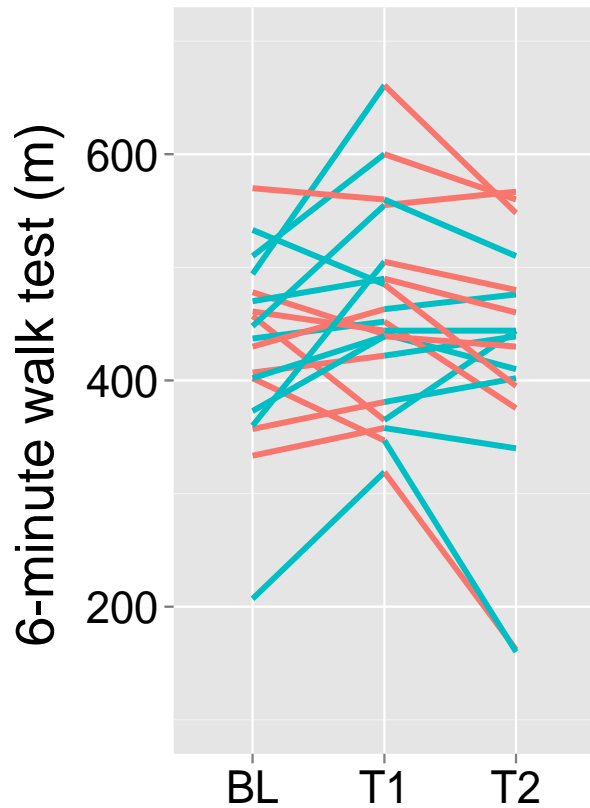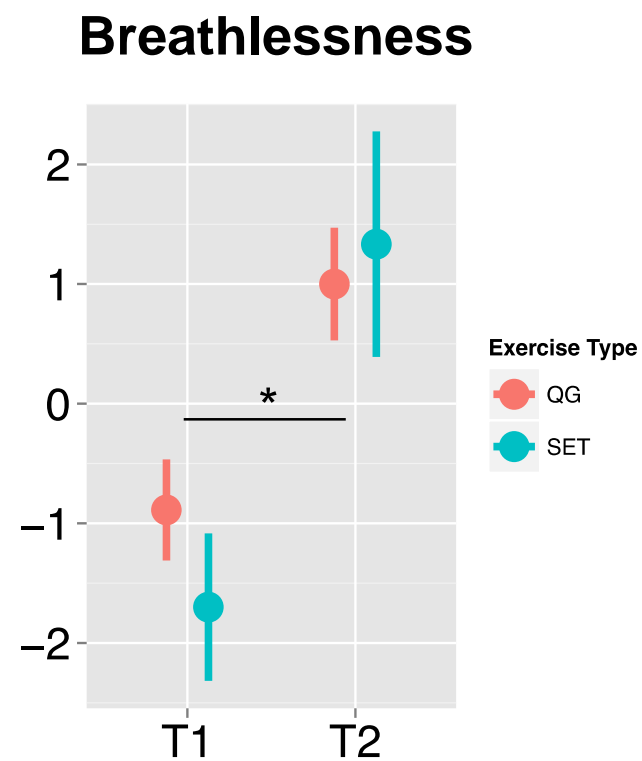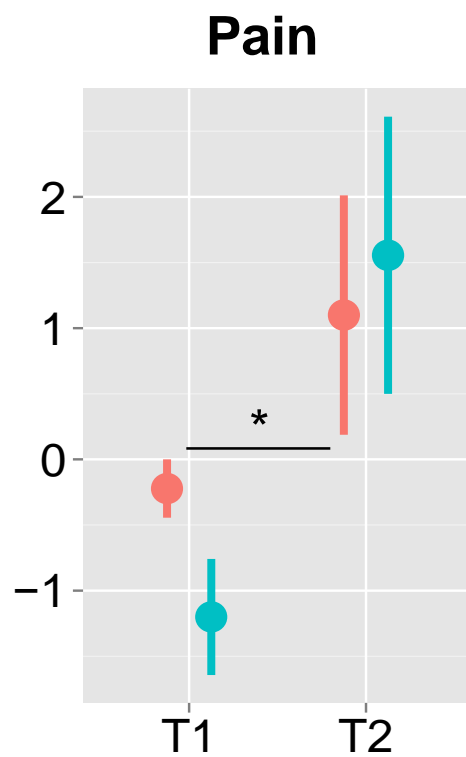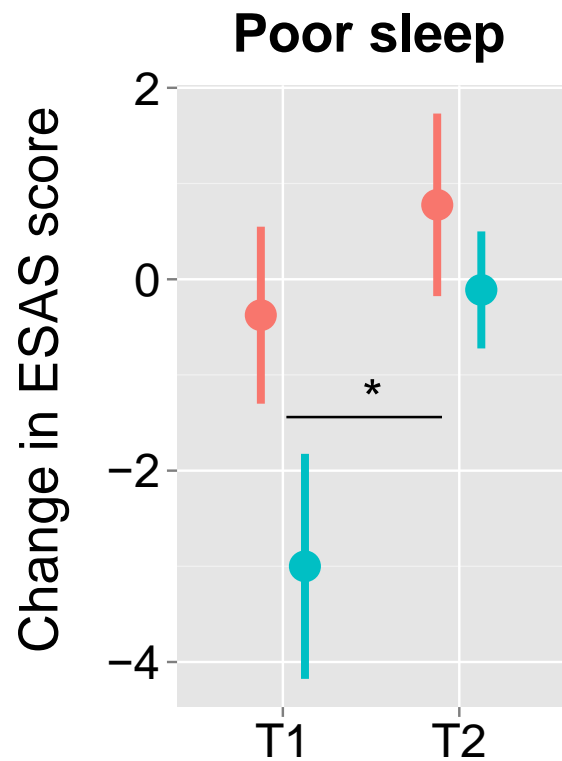
Results – Satisfaction & Compliance

QG and EX were rated as equally
helpful (p= 0.07) and enjoyable (p = 0.5) and

Helpful   Enjoyable

High compliance rates for each exercise intervention:
QG (74%) and EX (90%) (p = 0.09)

Conclusions

- Neither QG nor SET had a measurable impact on anxiety and depression in this study

- There was also no difference between the effects of QG and SET on most symptoms and QOL

- SET is better than QG for reducing patients' feelings of weakness and their measured endurance capacity (6MWT)

- Improvements achieved during the first exercise intervention were not sustained during the second exercise intervention period for several outcomes

- Patients reported similar high levels of enjoyment and satisfaction for EX and QG