

# HOW INDIVIDUALIZED AND SPECIFIC DOES THE EXERCISE PRESCRIPTION HAVE TO BE IN ORDER TO BE BENEFICIAL?

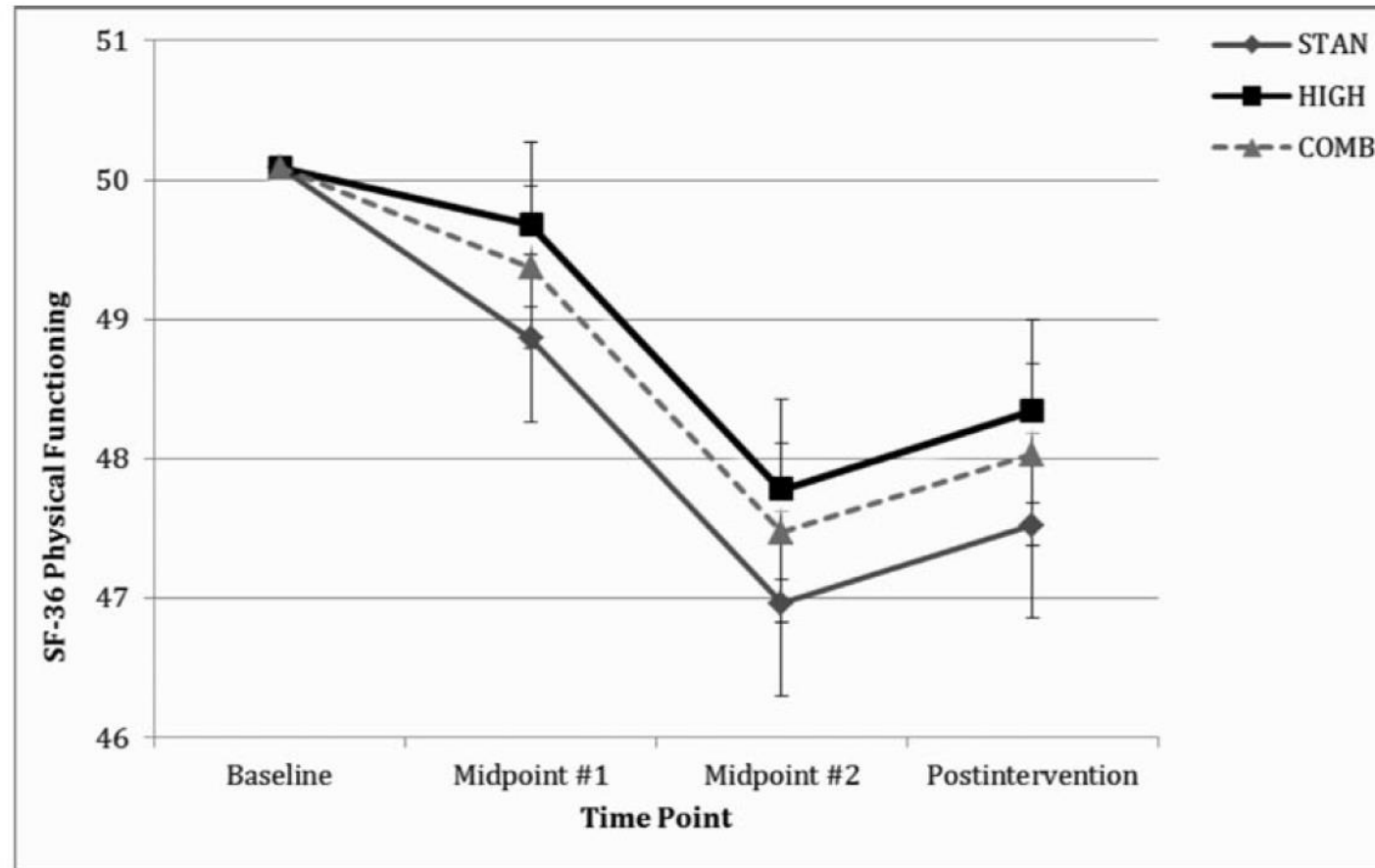


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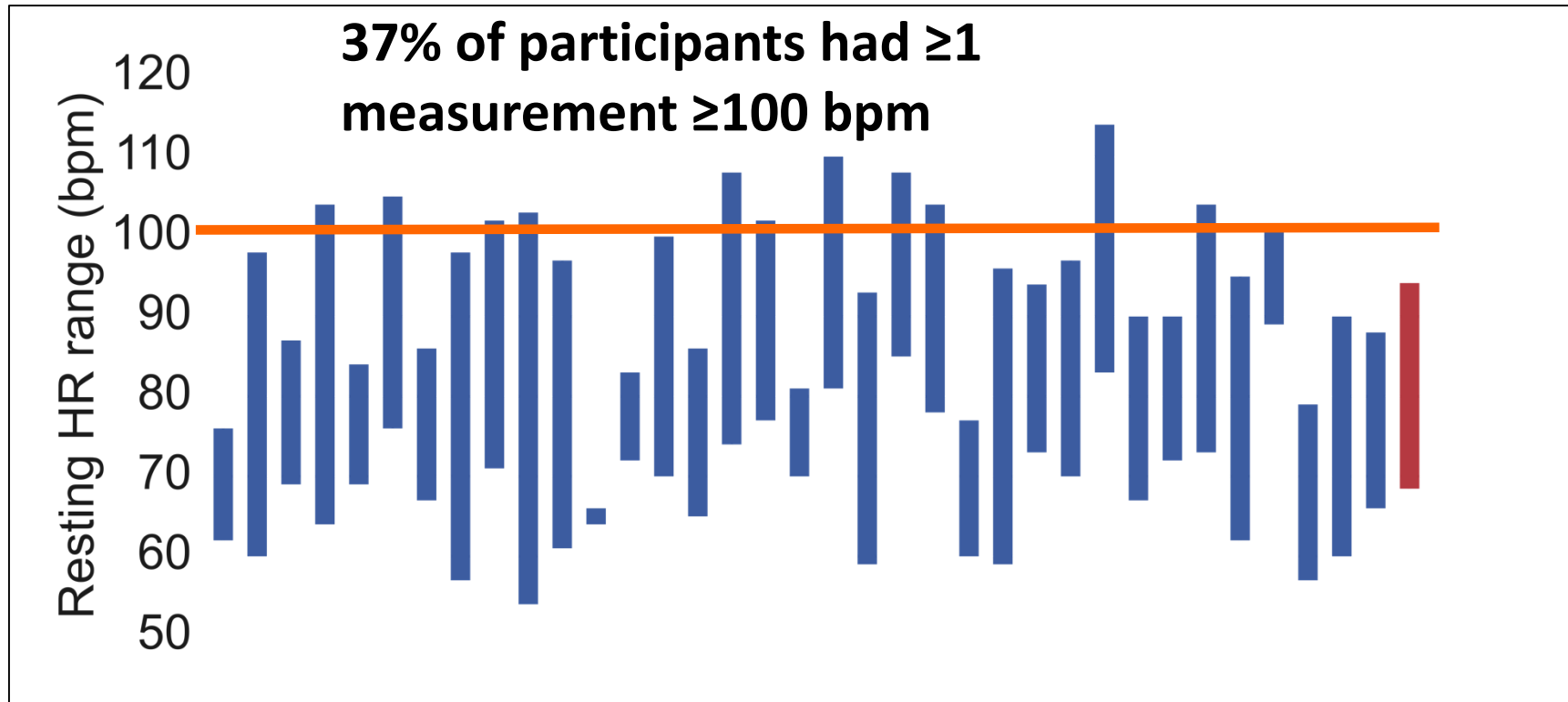
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Why is it a challenge to get the prescription right during chemotherapy & radiation?

# Exercise is trying to counteract decline



# Fluctuations in physiological response



Weekly standardized measurements of resting HR



How to deliver an individualized  
prescription during treatment?



### Your oncologist recommends:

☐ Supervised exercise + nutrition information sessions during chemotherapy

The NExT research study invites you to participate in a supervised exercise program and nutrition information sessions designed for women undergoing chemotherapy for breast cancer. To sign up or learn more,

call **604-872-4527**  
e-mail **cep.lab@ubc.ca**

Agency I.D.:

Patient name:

*Exercise and healthy eating have important benefits as you undergo chemotherapy, by helping you:*

- *manage existing health conditions*
- *reduce treatment side-effects*
- *ease your recovery.*

Your oncologist notes that you have the following health considerations:

**CVD:**

- ☐ cardiac  
☐ peripheral  
☐ cerebrovascular

**Other / notes / details:**

**Pulmonary:**

- ☐ COPD  
☐ asthma  
☐ interstitial

**Metabolic:**

- ☐ diabetes (type 1)  
☐ diabetes (type 2)  
☐ thyroid disorder  
☐ renal/hepatic

**Musculoskeletal:**

- ☐ osteoporosis  
☐ osteoarthritis  
☐ hernia  
☐ low back condition

**Medications:**

- ☐ antianginal  
☐ antihypertensive  
☐ beta-blocker  
☐ diuretic  
☐ antiarrhythmic  
☐ anticonvulsant

Physician / Oncologist:

Date:

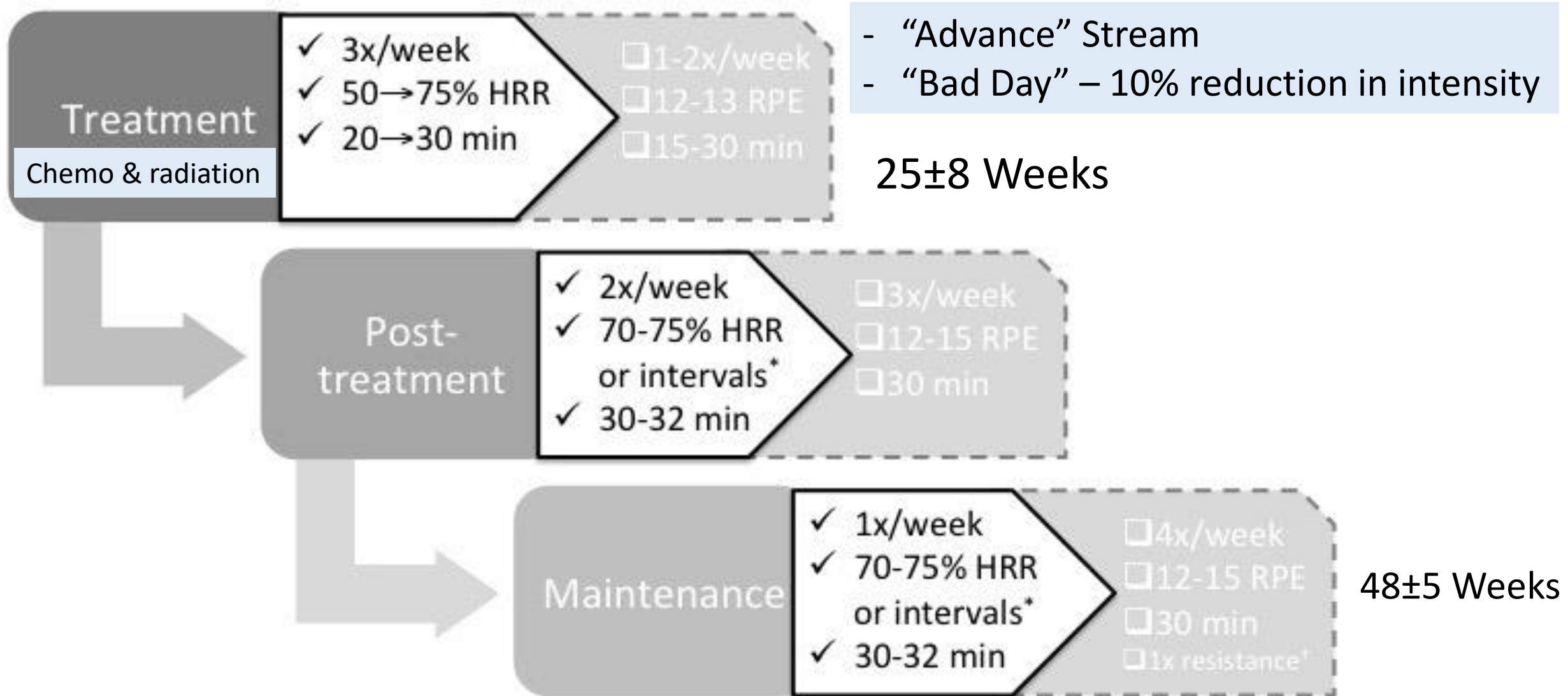
# Nutrition and Exercise during Adjuvant Treatment (NExT) Study

- Newly diagnosed stage I-III breast cancer
- Going to receive adjuvant chemotherapy
- Single arm trial
- Oncologist referral to program

- **Primary Aim:** Feasibility
- **Secondary Aims:** Efficacy

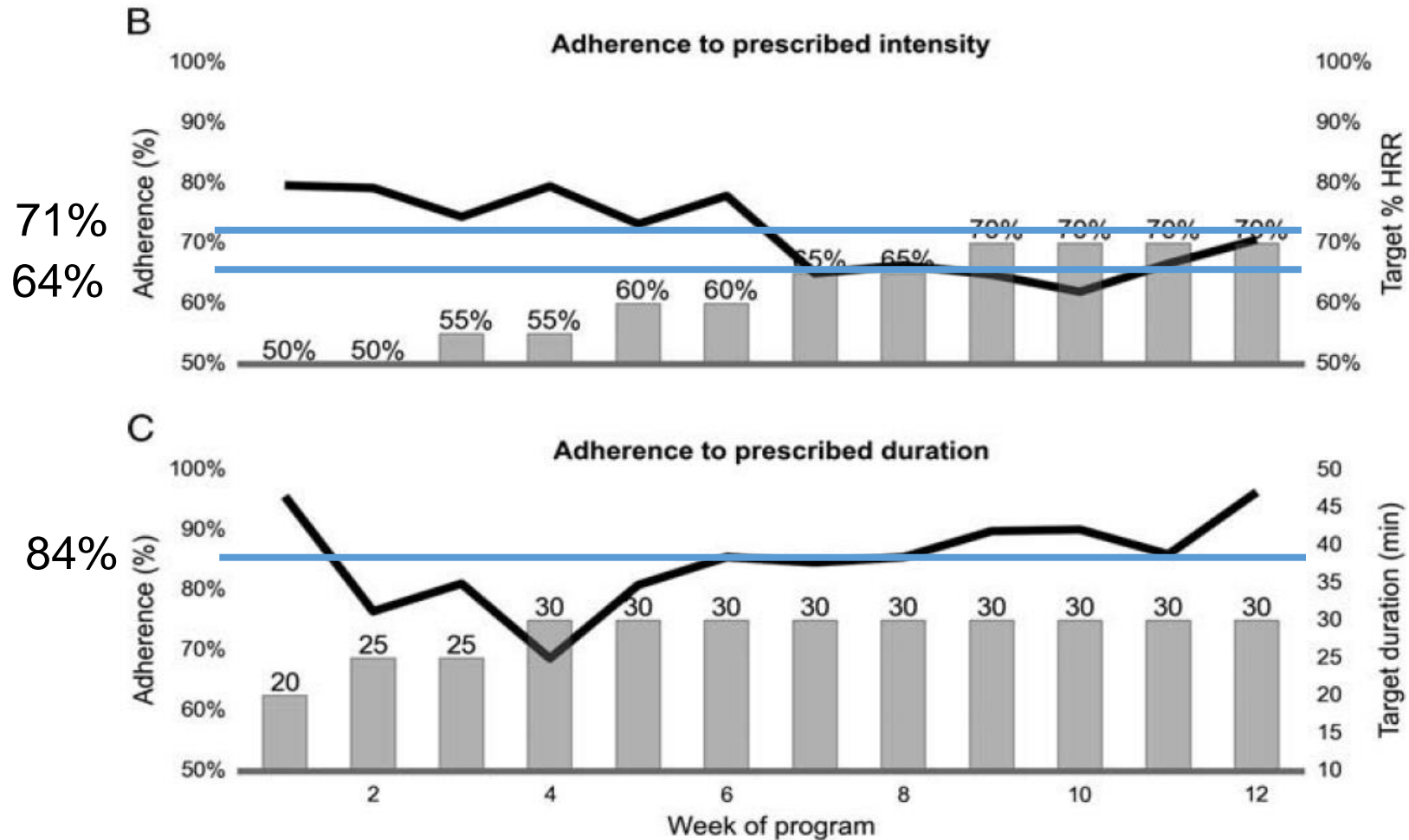
*Kirkham et al. The Oncologist 2017;22:1–11*

# Exercise Prescription



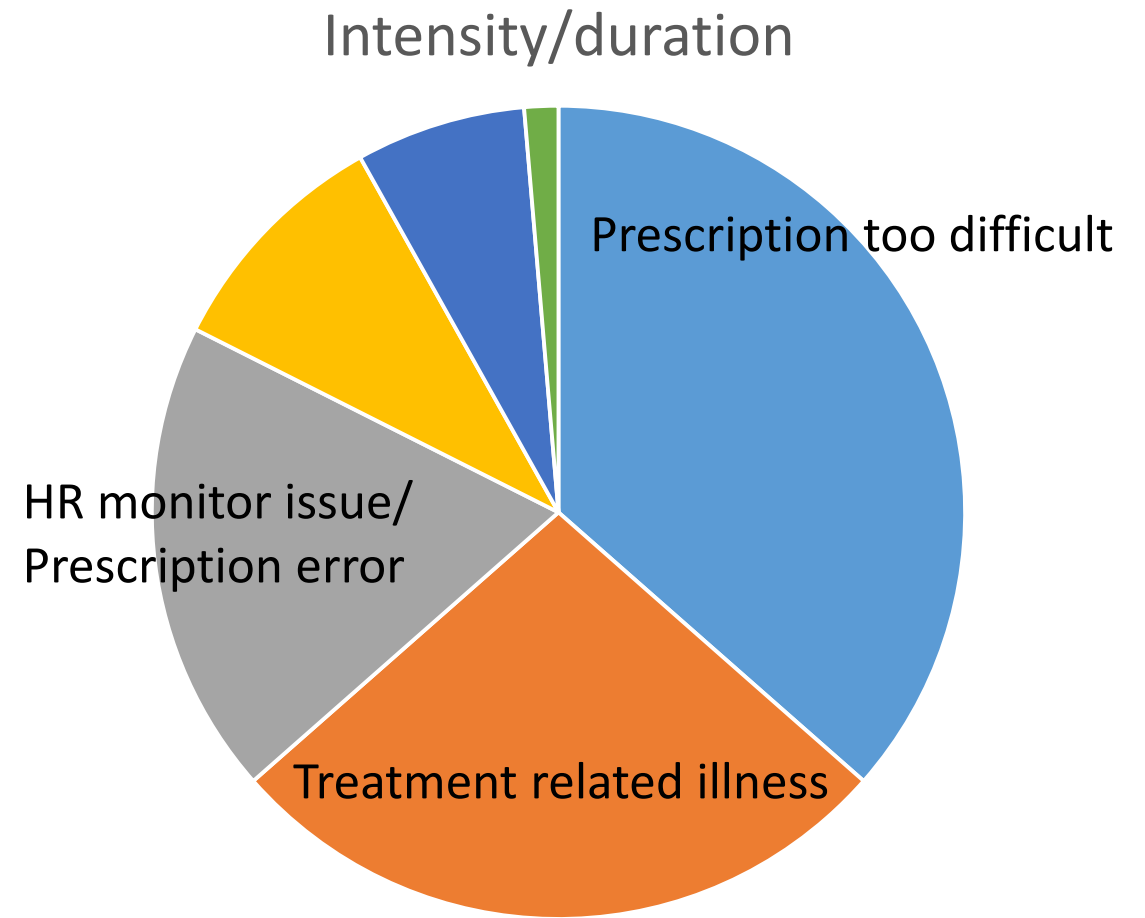
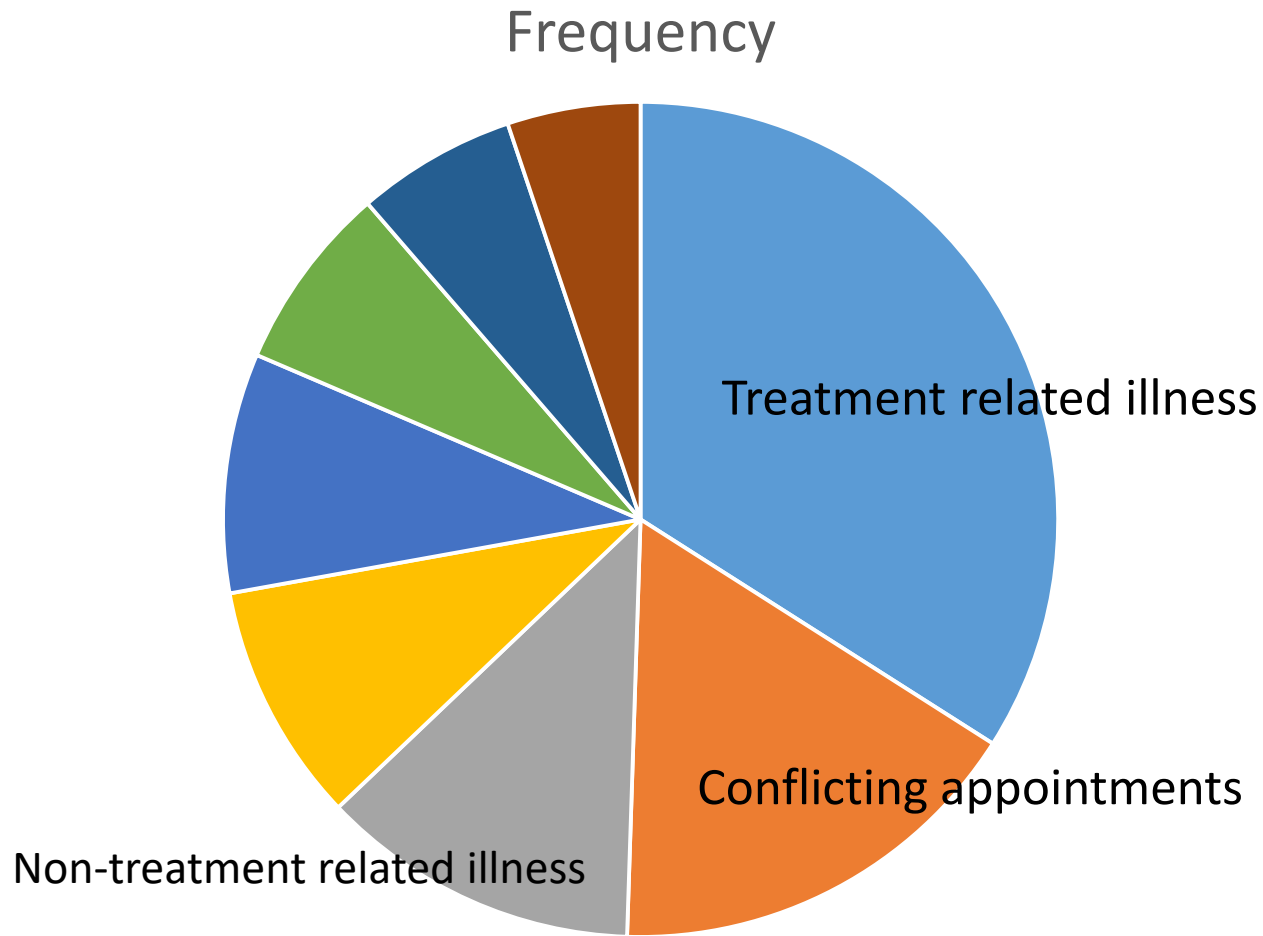
# Adherence to exercise prescription DURING treatment

Attendance = 64%

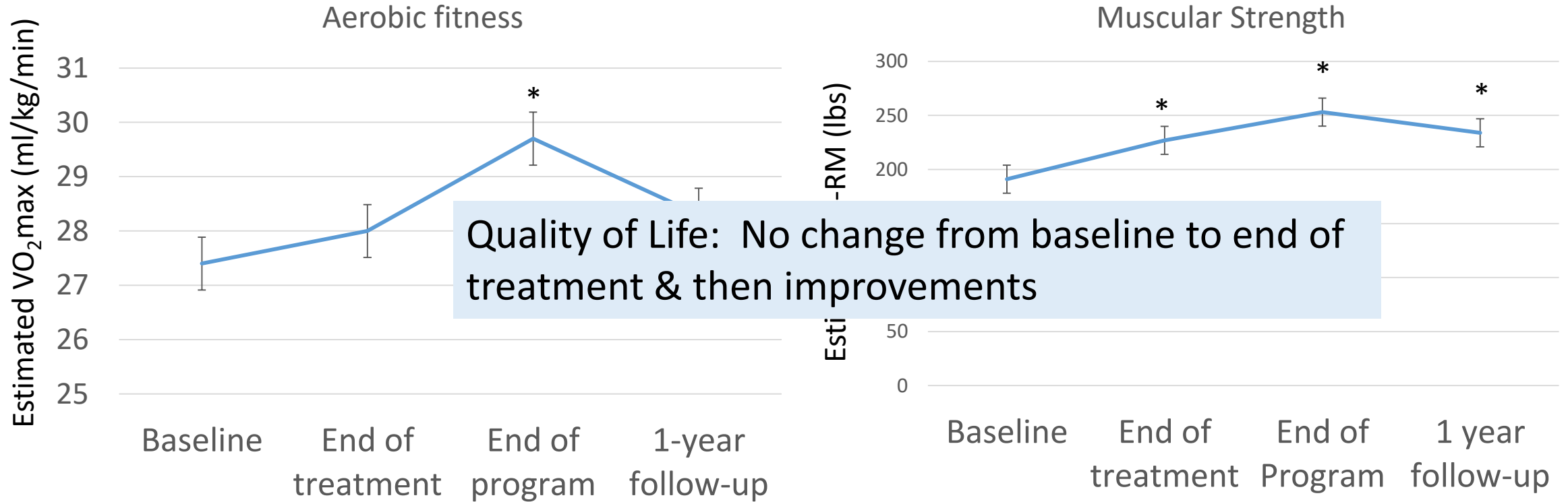




# Barriers to adherence to prescription during treatment



# Change in fitness and strength



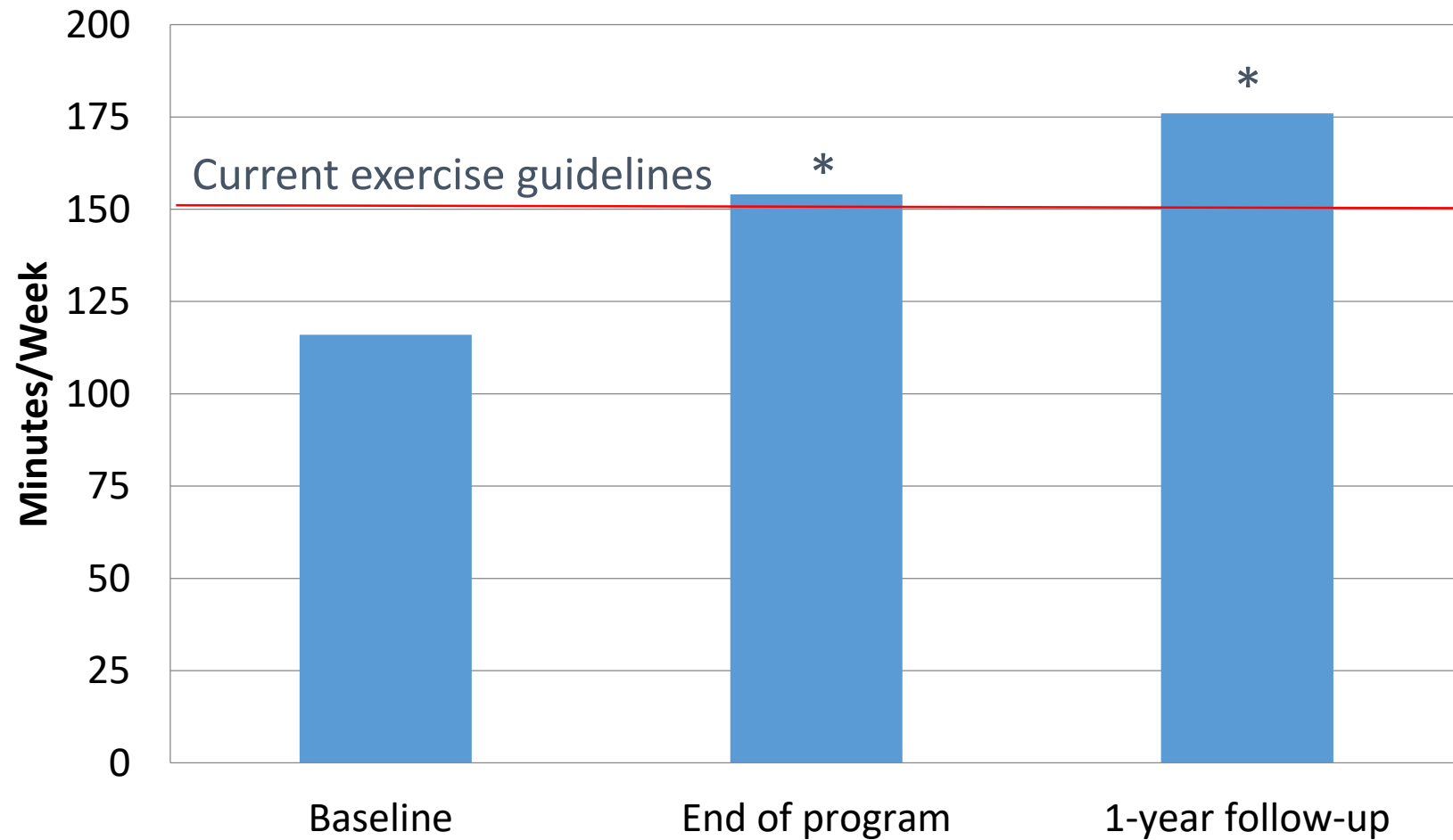
Aerobic fitness maintained during treatment and increased after treatment

Strength increased during treatment & continued to increase after treatment

\* Significantly higher than baseline

Kirkham (in preparation)

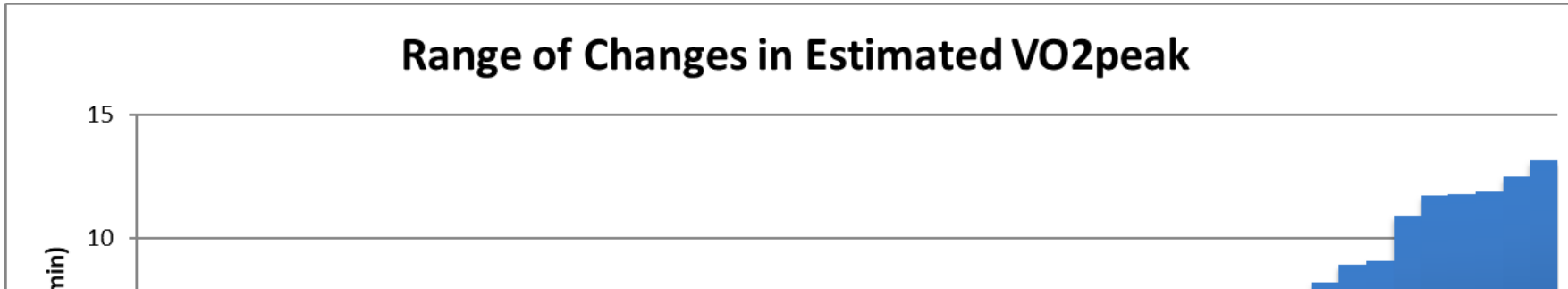
# Are women meeting physical activity guidelines?



\* Significantly higher than baseline

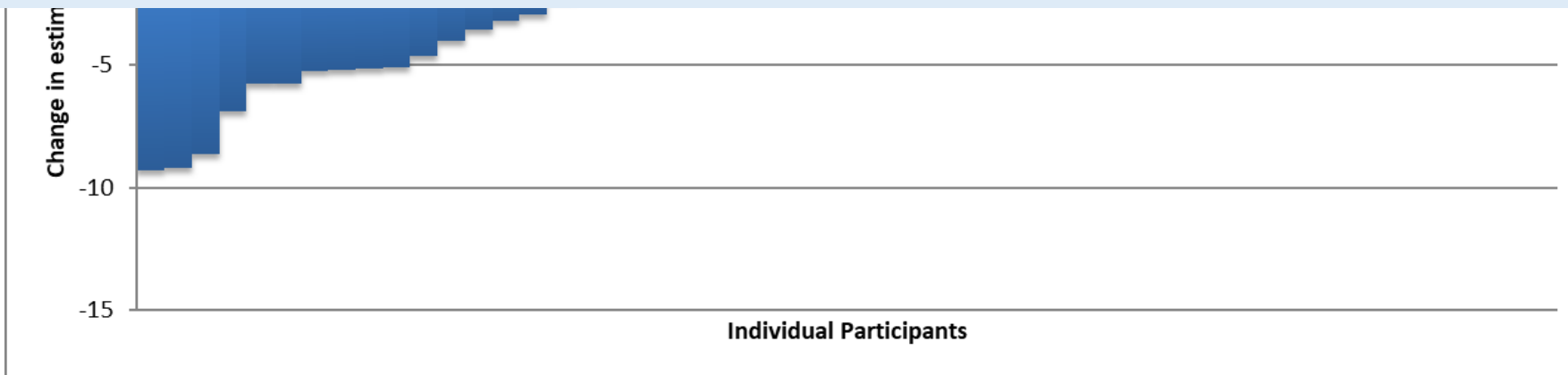
Kirkham et al. Med Sci Sports Exerc 2018; 50, 177–186.

# How effective was the prescription during treatment ?

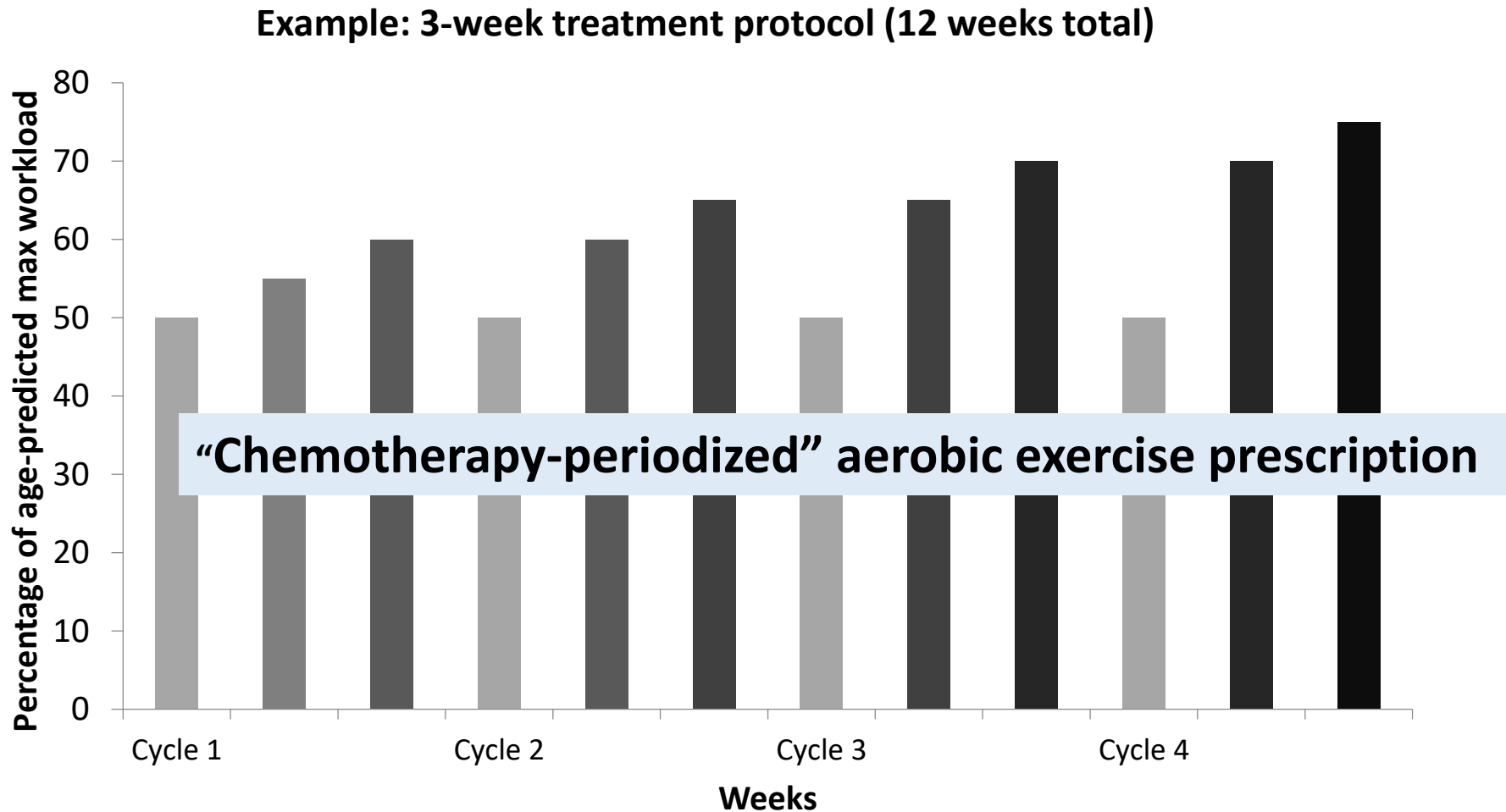


NOT associated with adherence to intervention

More research needed to better understand how to adjust prescription



# Can we do better with our prescription?



# Summary

- During chemotherapy & radiation goal to maintain physical function
- Adherence to aerobic prescription was increased by “bad days” approach
- More improvements after completion of treatment
- On-going research needed on how best to individualize the exercise prescription & deal with fluctuations during treatment

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## Acknowledgements

- **Trainees:**
- Sarah Neil-Sztramko
- Amy Kirkham
- Bolette Rafn
- Stanley Hung
- Kelcey Bland
- Sarah Sayyari
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