

Name: Catherine Seet-Lee

Position & Affiliation: PhD candidate at the University of Sydney

Full Reference (including all authors (presenter in bold) & title):

Title: The Effect of Intra-infusion Exercise on Chemotherapy Side Effects; an Interim Analysis

Authors: Catherine Seet-Lee¹, Jasmine Yee¹, Sarah Marvin¹, David Mizrahi¹, Kate Mahon², Judith Lacey², Kate M. Edwards¹

1. University of Sydney, Sydney, Australia. 2. Chris O'Brien Lifehouse, Sydney, Australia.

Conference/Meeting Name: American College of Sports Medicine (ACSM) Annual Scientific Meeting

Location: Boston, USA

Dates: 28th May – 31st May

Presentation Type: Poster and oral

I was very excited to attend and present at the American College of Sports Medicine (ACSM) Annual Scientific Meeting, the largest exercise medicine conference globally. The conference started with an Exercise Oncology preconference meeting aimed at establishing a new society called the International Society of Exercise Oncology. The meeting brought together international researchers and clinicians who have made significant contributions to the Exercise Oncology field to discuss how to form a new society and multidisciplinary international perspectives on the future of Exercise Oncology research and practice. The consensus was that globally Exercise Oncology is present in healthcare but there is still work to be done to better integrate Exercise Oncology into standard care for patients with cancer. We were provided the opportunity to contribute our ideas for the creation of this new society and I will be looking forward to seeing the official formation of this society next year.

I was amazed by the enormity of the conference and the number of concurrent presentations on all topics related to exercise medicine. Highlighted presentations included cardio-oncology, animal to clinical cancer studies, social support in cancer, the tumour microenvironment, and metastatic disease. It was particularly insightful to watch presentations and meet fellow researchers exploring changes to tumour microenvironments with exercise in clinical populations. I networked with international researchers and clinicians including those from the USA, UK, Canada, New Zealand, Spain and the Netherlands, and I hope to keep in contact with them for potential future collaborations. I valued the opportunity to network with renowned international researchers to help me build networking skills that I will continue to use in my career.

I presented my poster for my ongoing trial which investigates intra-infusion exercise (exercise whilst receiving chemotherapy) and I was honoured to be selected to present a 2-minute thesis presentation on my research in intra-infusion exercise on tumour vascularisation. There was great reception to my presentations particularly from researchers in the USA, UK and Canada who hoped to use my research results in their own clinical practice.

A personal highlight for me was networking with prominent researchers whose published works have provided some basis for my own research. Another personal highlight was meeting my mentor from Texas and having meaningful discussions about exercise and the tumour microenvironment and the translation from preclinical to clinical research.

I finished my trip by attending a Red Sox baseball game at the nearby Fenway Park and had an obligatory hotdog and drink. A win by the home team was a nice end to a memorable and successful conference.

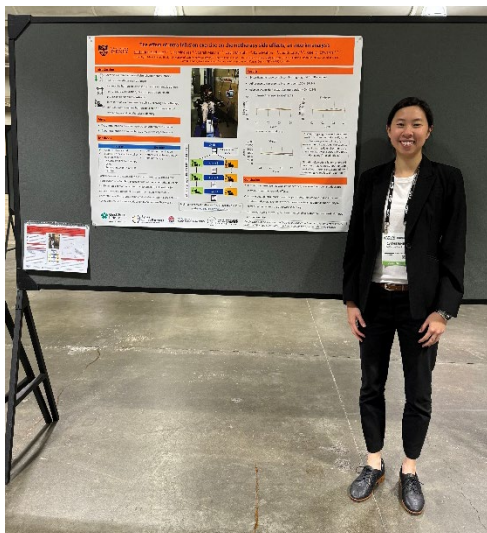
I am very grateful to Sydney Cancer Partners for providing me with the opportunity to attend this international conference which allowed me to be fully immersed in the Exercise Oncology field. I felt very proud to have presented some of the research being undertaken in Australia and being able to contribute to the current research. I hope to continue to keep in contact with the people that I networked with and to collaborate internationally on future Exercise Oncology projects that will have a global impact.



ACSM Annual Scientific Meeting in Boston,
USA



Presenting my 2-minute thesis
presentation



Presenting my poster for intra-infusion exercise
on chemotherapy side effects



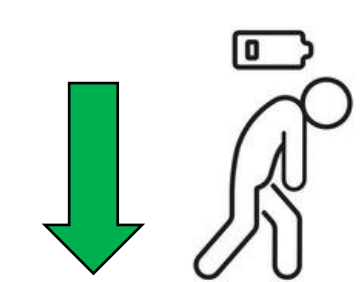
Baseball game in Boston

The effect of intra-infusion exercise on chemotherapy side effects; an interim analysis

Catherine Seet-Lee^{1, 2, 3}, Jasmine Yee^{1, 2}, Sarah Marvin^{1, 2}, David Mizrahi^{1, 4}, Kate Mahon^{1, 3}, Judith Lacey^{1, 3}, Kate M. Edwards^{1, 2}

1. Faculty of Medicine and Health, University of Sydney, NSW, Australia; 2. Charles Perkins Centre, University of Sydney, NSW, Australia; 3. Chris O'Brien Lifehouse, NSW, Australia; 4. The Daffodil Centre, The University of Sydney, a joint venture with Cancer Council NSW, NSW, Australia

Introduction



Aerobic exercise before and after chemotherapy infusion reduces side effects such as fatigue.



Patients cite barriers to exercise such as treatment side effects, lack of exercise education, lack of support from health professionals and time constraints.



Intra-infusion exercise (exercise whilst receiving chemotherapy infusion) may overcome barriers to exercise during a period when they would be otherwise sedentary.

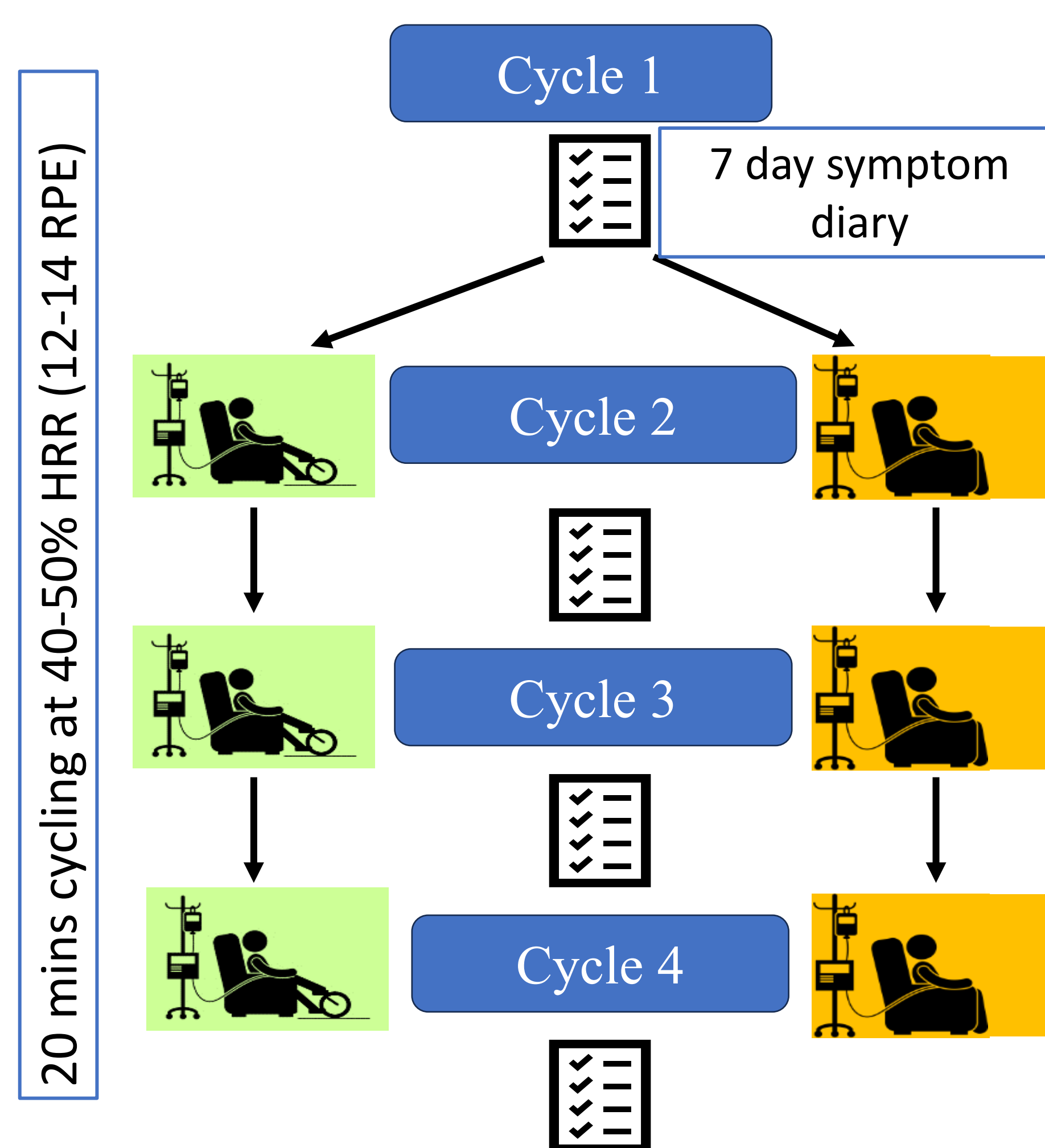
Aims

- Does intra-infusion exercise impact chemotherapy side effects?
- Does intra-infusion exercise change physical activity behaviors?

Methods

Inclusion		Exclusion	
✓ Aged 18-75 years old	X	Beta-blocker medication	
✓ Stage I-III breast, colorectal or ovarian cancer	X	Anthracycline chemotherapy	
✓ 1+ completed chemotherapy cycles	X	Immunotherapy	
✓ Chemotherapy infusion >60 minutes			

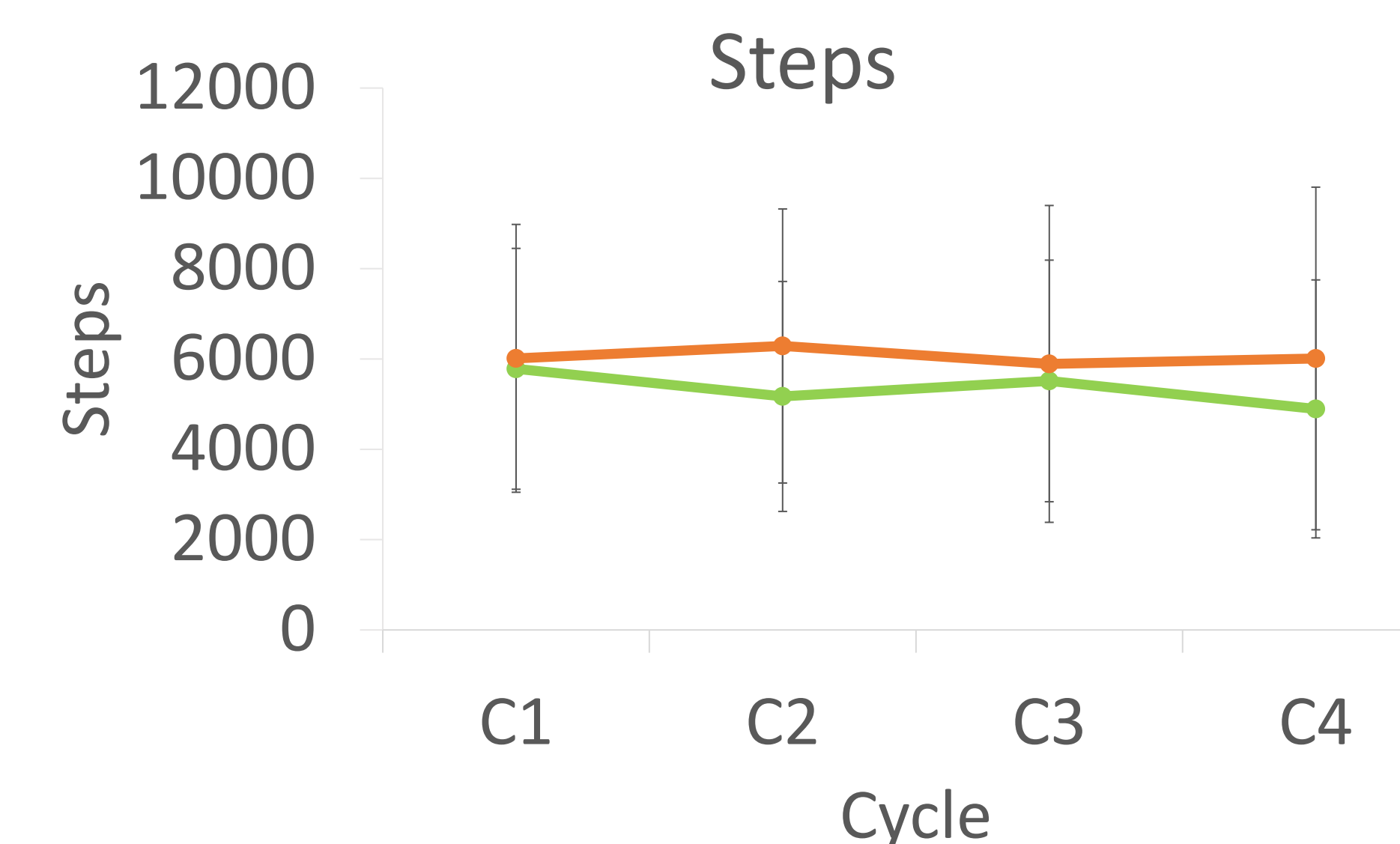
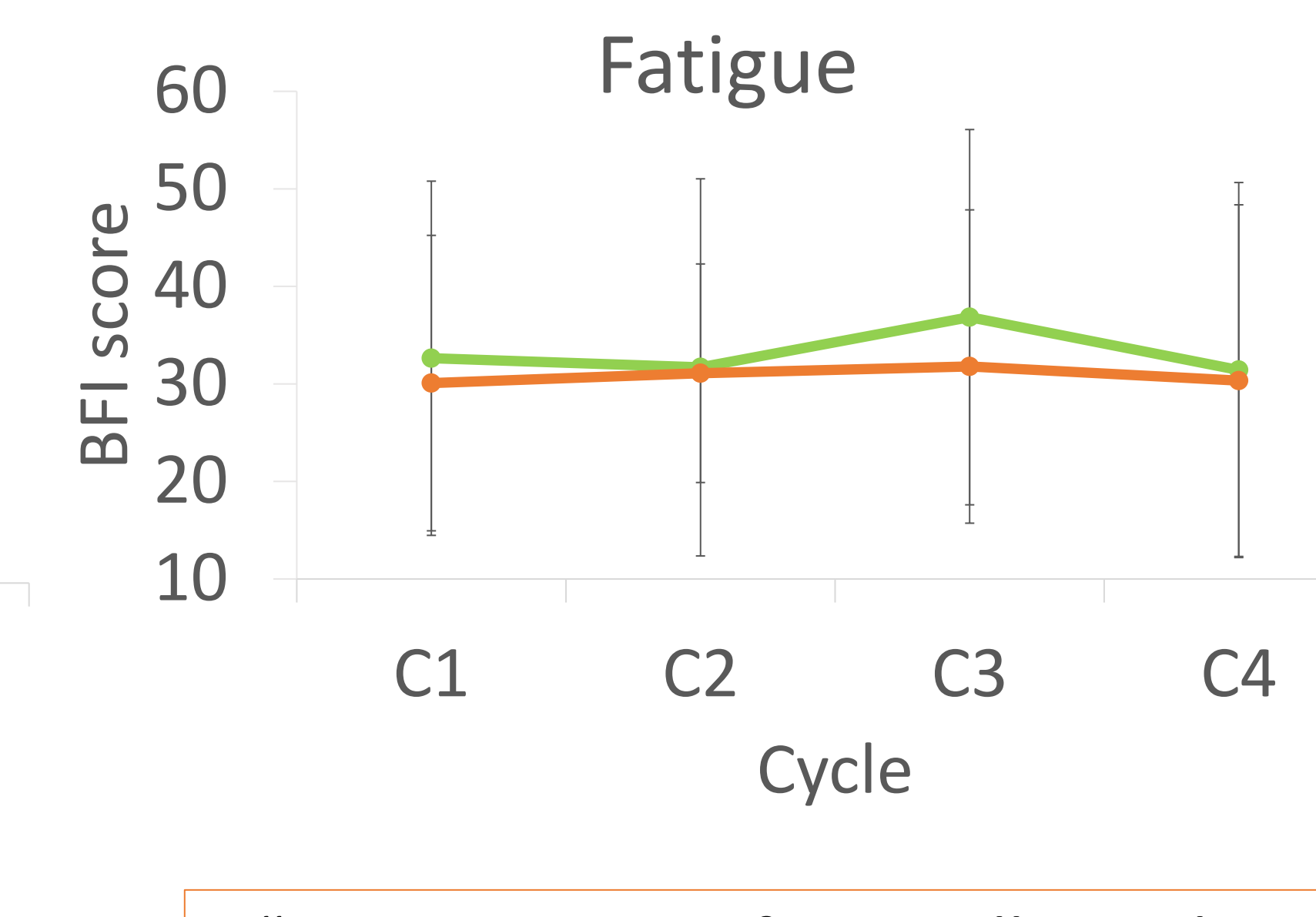
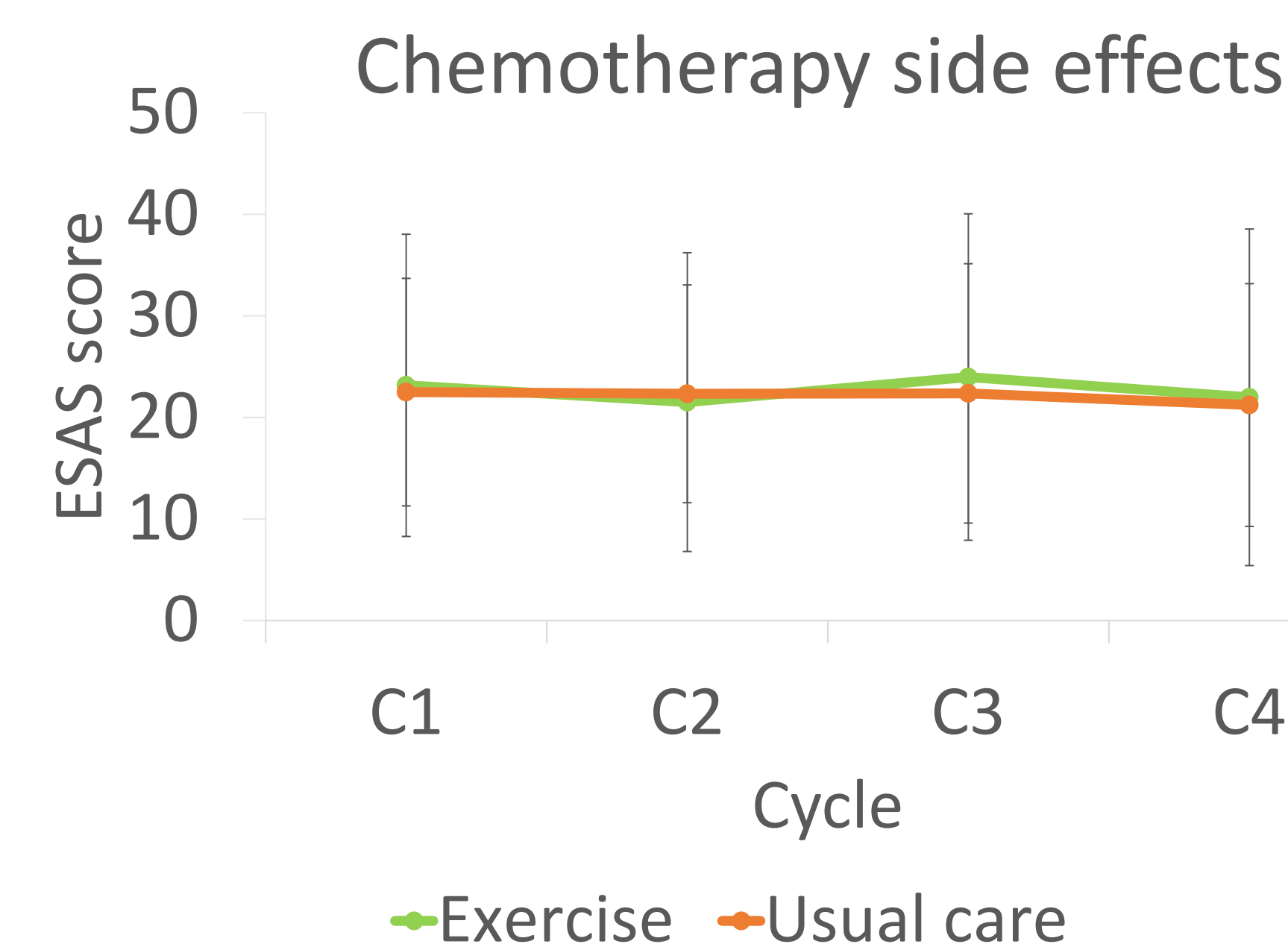
Participants were randomized to exercise or usual care. The exercise group cycled on a foot bike placed in front of their chemotherapy chair for 20 minutes at moderate intensity (40-50%HRR) followed by 20 minutes recovery. The usual care group continued with routine chemotherapy. Both groups completed a 7 day symptom diary between cycles and received exercise education by an Exercise Physiologist.



Feel free to contact Catherine if you have any questions
catherine.seetlee@sydney.edu.au

Results

- 34 participants have completed this ongoing trial (n=18 exercise)
- Adherence to the exercise intervention = 100% (54/54)
- Adverse events during exercise intervention = 0% (0/54)



“Even just going for a walk was hard work... So it was actually really good because you were in a safe environment. I was doing the exercise thing, I was in safe environment... It was enough. It was a good thing to be doing and I'm glad I did it.”

“It definitely made it [chemotherapy] more fun... it gave me something to do while I was there. It preoccupied my brain and gave me less time to think.”

Conclusion

- ✓ Intra-infusion exercise has excellent adherence, is safe and feasible, and does not increase chemotherapy side effects.
- ✓ A single bout of intra-infusion exercise per chemotherapy cycle is not sufficient to establish behavioral change, however, does provide an additional opportunity to exercise when patients are otherwise sedentary.
- ✓ Future work aims to investigate chemotherapy efficacy (tumour response) with intra-infusion exercise.

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