

DAILY PHYSICAL ACTIVITY PATTERNS IN CANCER SURVIVORS: A PILOT STUDY

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INTRODUCTION

Low levels of physical activity are associated with low Quality of Life (QoL) and increased chances of morbidity and mortality[1]. In cancer survivors these activity levels have been studied primarily by means of questionnaires[2], while objective information on actual daily physical activity levels and their distribution throughout the day is lacking.

AIM

To study the differences in objectively measured daily physical activity patterns of cancer survivors in comparison to healthy individuals.

METHOD

- A cross-sectional study in 12 cancer survivors and 12 healthy controls.
- Physical activity patterns were objectively and subjectively assessed:
 - Objective: 5-day (8 am – 10 pm) physical activity monitoring with a MTx-w inertial 3-D motion sensor.
 - Subjective: self-rated physical activity level of the previous week (PASIPD questionnaire) completed following activity monitoring.



Figure 1: MTx-w motion sensor and a PDA

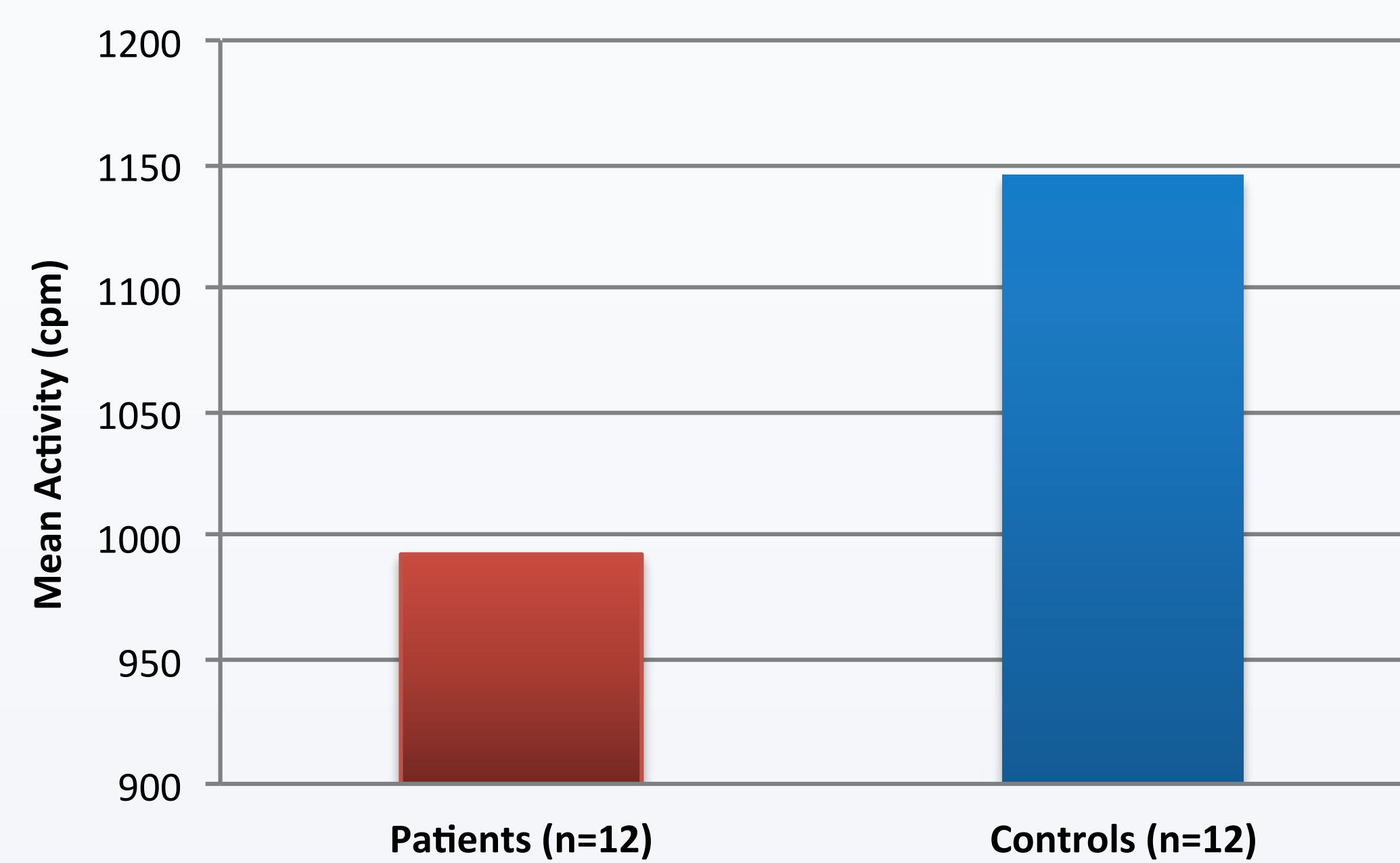


Figure 2: Mean daily physical activity (cpm)

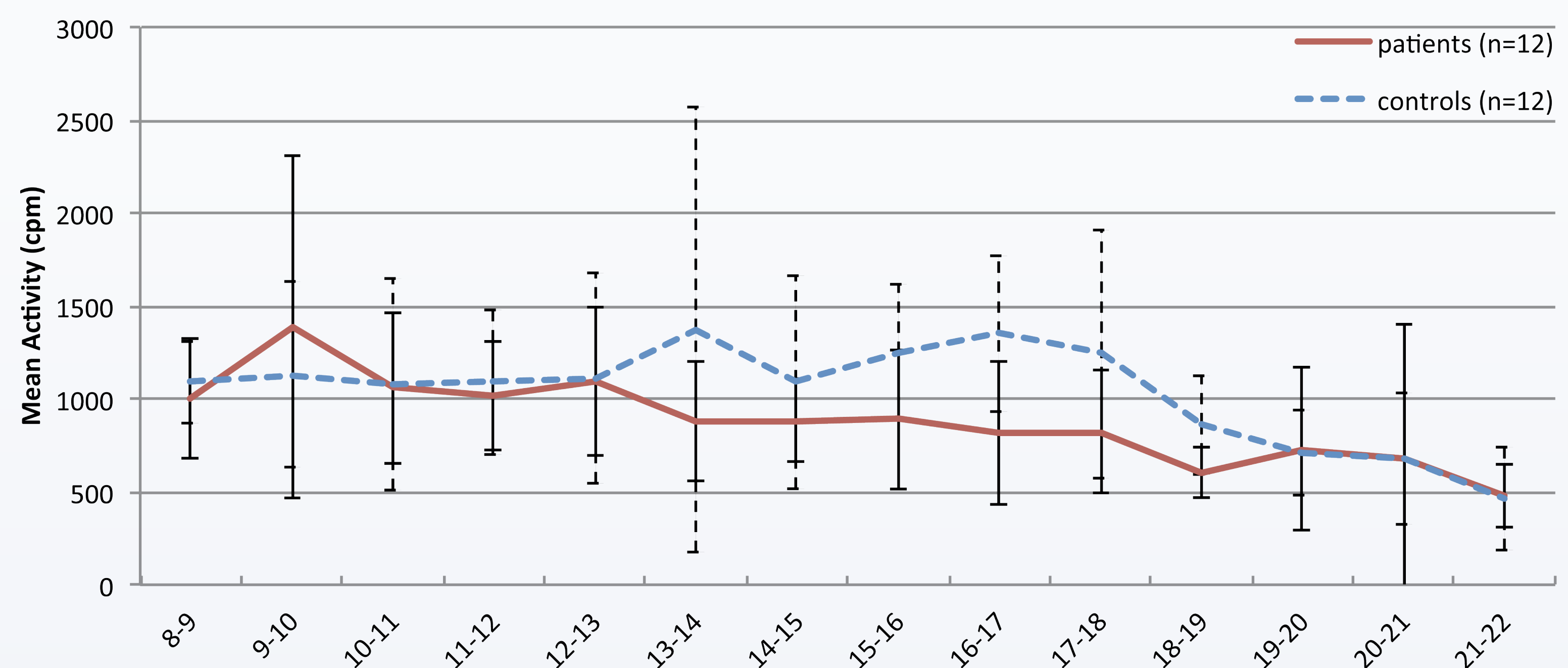


Figure 3: Mean daily physical activity pattern per hour (8 am – 10 pm) for cancer survivors and healthy controls

RESULTS

- Mean daily physical activity is lower in cancer survivors than in healthy controls (fig. 2).
- In cancer survivors a marked decrease of physical activity was observed during the afternoon and the early evening compared to healthy controls (fig. 3).
- Self-rated physical activity does not reflect actual physical activity in both cancers survivors ($r=-.480$, $p=.180$) and healthy controls ($r=.088$, $p=.797$).

DISCUSSION & CONCLUSIONS

Cancer survivors showed lower daily physical activity levels than healthy controls. The hour-by-hour analysis revealed that physical activity is primarily decreased in the afternoon and early evening when compared to healthy controls. Insight in actual daily physical activity patterns through activity monitoring can help to personalize physical activity advice for the patient more adequately. Lastly, care should be taken when interpreting activity questionnaires, since their results do not represent actual physical activity levels.



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REFERENCES

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