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Improving physical activity, especially in combination with optimizing protein intake, after surgery has a potential positive effect on recovery of physical functioning in patients after oncological surgery. We developed the hybrid OPRAH intervention that enables self-monitoring of physical activity and protein intake, after hospital discharge.

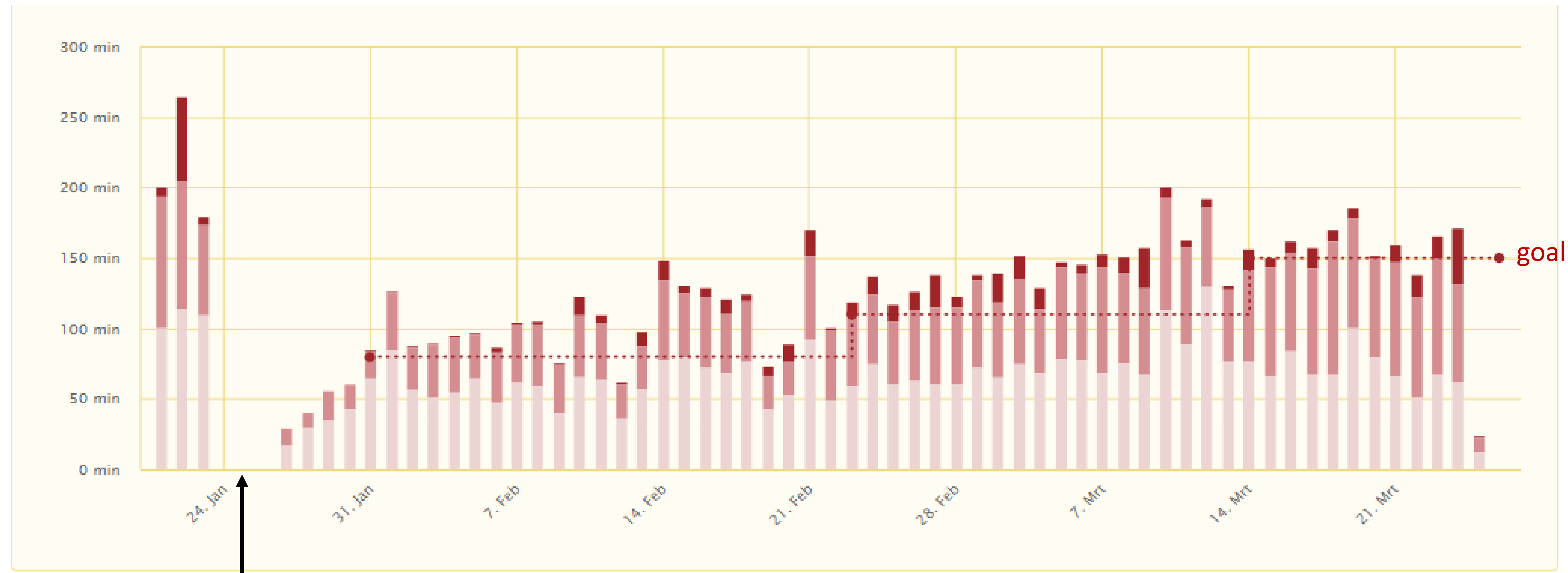
PURPOSE

To determine the feasibility of the OPRAH intervention and the feasibility and acceptability of the study design as prelude to a randomized controlled trial in patients after gastro-intestinal or lung cancer surgery.

METHODS

A non-randomised intervention study was conducted in 32 patients. The intervention consisted of the use of the Atris app and remote coaching by a physiotherapist and dietician during 3 months after hospital discharge. Measurements included the PROMIS-physical functioning, physical activity (ActivPAL), bioelectrical impedance analysis, 48-h dietary recall and physical performance tests.

Figure 1: An example of the course of physical activity from preoperatively to six weeks after hospital discharge



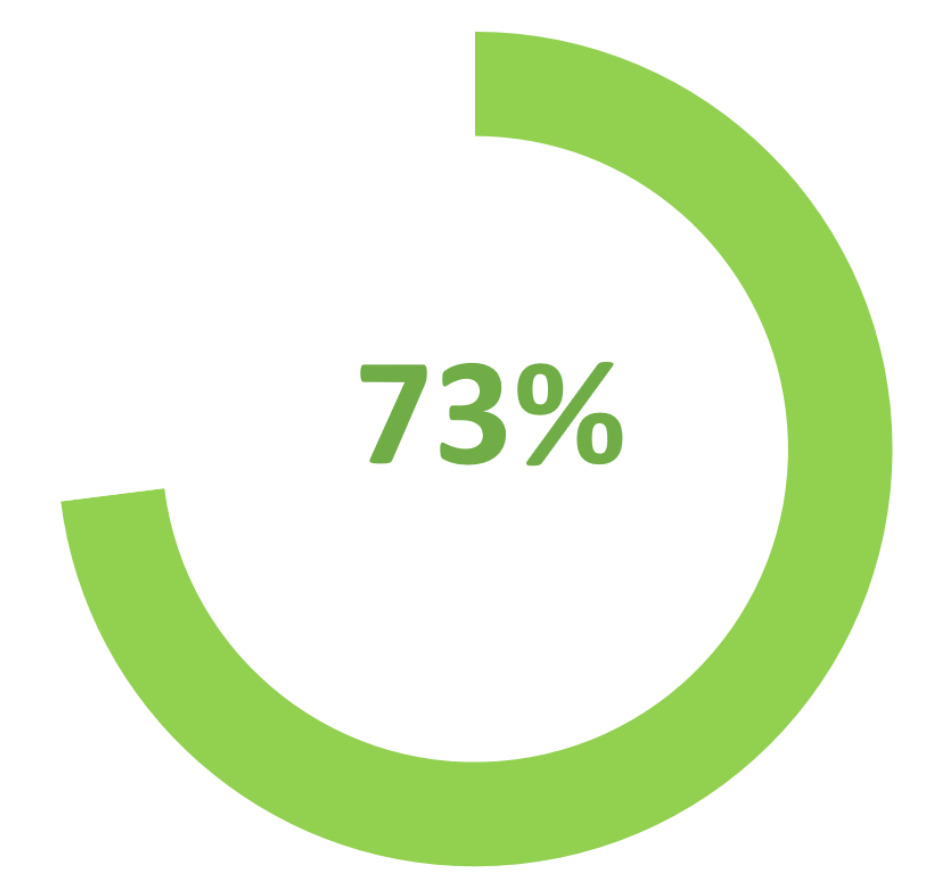
"I actually never knew that protein intake plays such a big role alongside exercise, you really become aware of it. I found it really added value."
Patiënt X

"I have to be honest, I really struggled to be active after hospital discharge. But the app made me go for a walk every time anyway. I think I would have done that much less without the app."
Patiënt Y

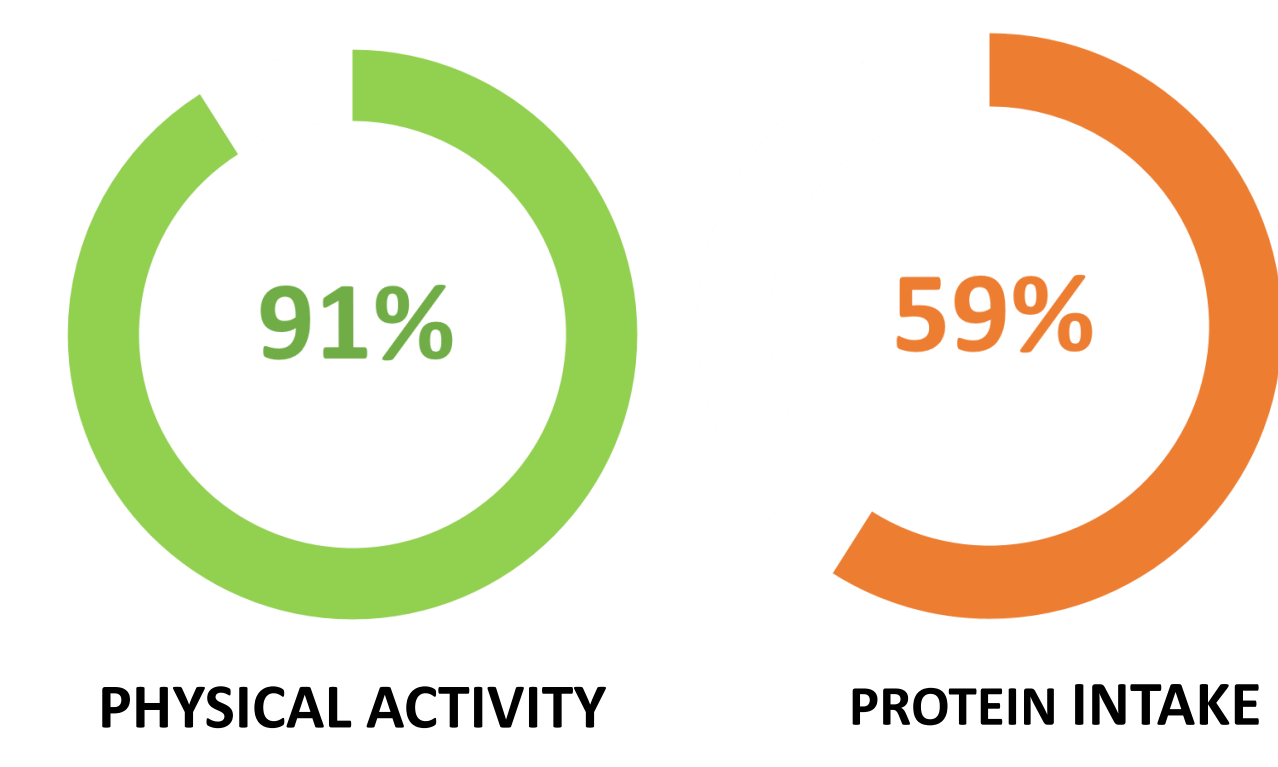
RESULTS

- + 95% of patients would recommend using the Atris app.
- + Adherence of wearing the activity tracker was good (91%).
- + No (S)AE's have been reported.
- + The completion rate of the follow-up measurements was 75%.
- +/- Of all outcomes, more than 80% was complete, except for the ActivPAL data (68% complete). This was due to lost and non-working sensors.
- Protein intake was not sufficiently tracked (59%). Patients reported that the number of nutritional products was too limited, reducing motivation to track it properly.

SYSTEM USABILITY SCORE



ADHERENCE TO THE INTERVENTION



CONCLUSION

Self-monitoring of physical activity and protein intake using the Atris app in patients after oncological surgery proved feasible. Based on our results, we slightly modified the Atris app and added several nutritional products. The study procedures were deemed feasible. However, actions will be taken to reduce the amount of missing data from the ActivPals.

