

Home-based prehabilitation for frail patients awaiting liver transplant

Preliminary results of the Fit4Cirrhotics@home study

Introduction



Many liver transplant candidates are frail



More complications and higher mortality



Prehabilitation can help, but adherence is often poor



Home-based, remotely monitored programs are promising

Objective

To evaluate the feasibility and effectiveness of a bimodal home prehabilitation program (exercise + nutrition) in frail patients with cirrhosis awaiting liver transplantation.



Methods

Design:

- Pre-post design
- @UMCG
- Prospectief clinical trial (start Oct 2024)

Patients:

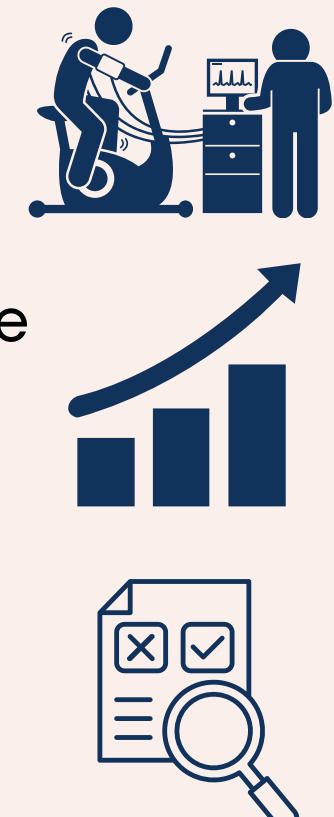
- Liver transplant candidates
- VO_2 threshold ≤ 13 or $\text{VO}_{2\text{peak}} \leq 18 \text{ ml/kg/min}$.

Intervention:



Outcomes:

- Primary:
 - Aerobic capacity
- Secondary:
 - Individual preoperative changes (e.g. sarcopenia, fatigue, biomarkers)
 - Feasibility (participation, adherence, safety)



Results (preliminary)

41 screened, 9 included (82% participation).

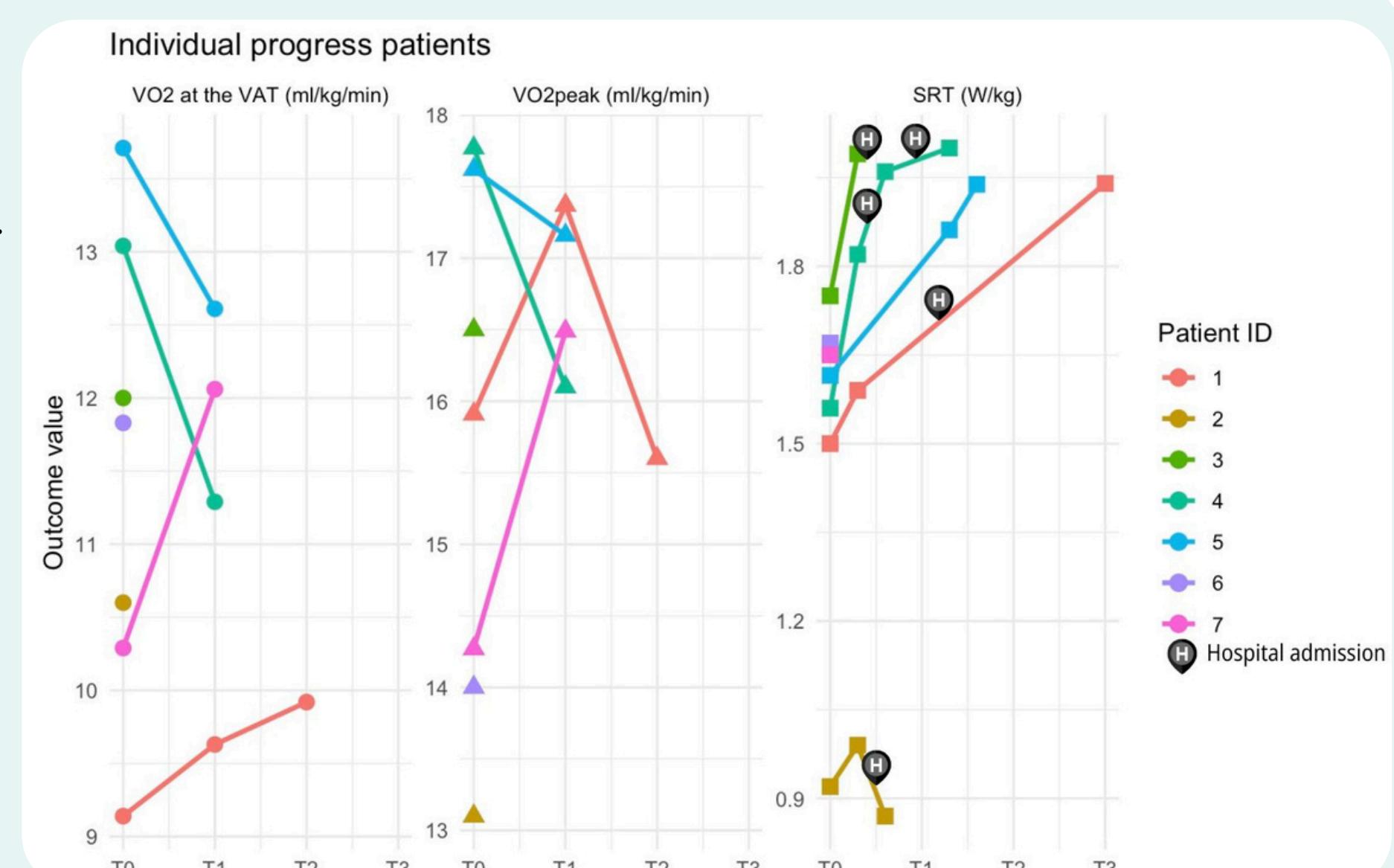
Exclusions: adequate fitness or no cirrhosis (e.g., ADPKD).

Status:

- 3 completed training
- 3 transplanted before reassessment
- 3 ongoing

Findings:

- Variable CPET results, but consistent SRT improvements.
- Adherence limited by disease instability & hospitalizations.
- Safe: no intervention-related adverse events.



Conclusion

- Feasible: Home-based, remotely monitored prehabilitation is possible in frail liver transplant candidates.
- Functional gains: Improved SRT performance, though CPET results were inconsistent due to clinical instability.
- Challenges: Research in this frail group is difficult but reflects real-world practice.
- Next steps: Recruitment ongoing (sample size: 24).
- Implication: Supports flexible, patient-centered prehabilitation for vulnerable surgical patients.



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Protocol

Contact



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