

Feasibility and impact of an exercise program in children with acute lymphoblastic leukemia during early cancer treatment

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1. BACKGROUND

- Survival rates in Uruguay exceed 80%, shifting the focus toward reducing treatment-related side effects and improving quality of life (QOL).
- During the early phase of treatment, children with leukemia experience a rapid decline in physical functions, increased fatigue, and reduced physical activity (PA) levels¹.
- Exercise interventions have been shown to be safe and potentially beneficial in pediatric oncology population^{2,3}.
- However, evidence remains limited during the acute phase of treatment, particularly in intrahospital settings and in Latin American contexts⁴.

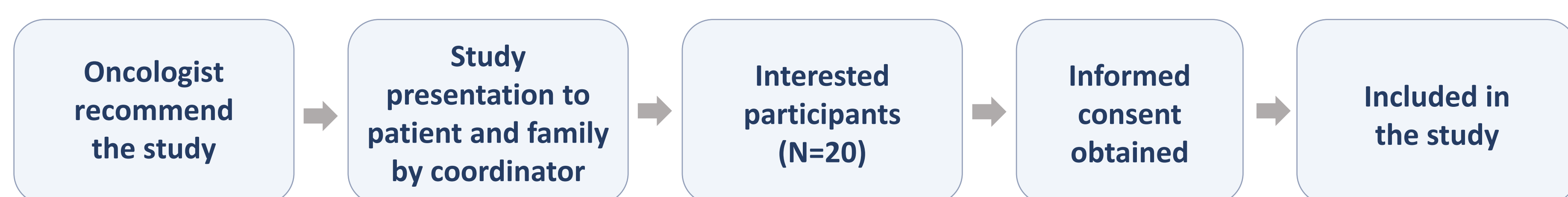
2. OBJECTIVES

Primary objective: Evaluate the feasibility of an exercise program during the first three months of treatment in children with acute lymphoblastic leukemia (ALL) at the Pérez Scremini Foundation in Uruguay

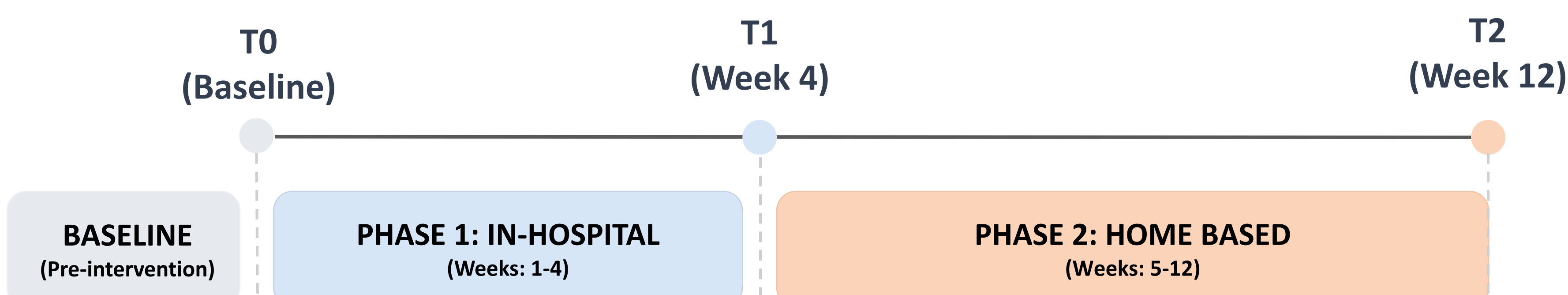
Secondary objectives: Assess changes in: (a) patient reported outcomes (QOL, Fatigue, Pain, PA levels); (b) physical and functional outcomes (motor development and functional capacity); (c) executive function; (d) treatment-related adverse events (compare with historical controls)

3. METHODS

1. RECRUITMENT



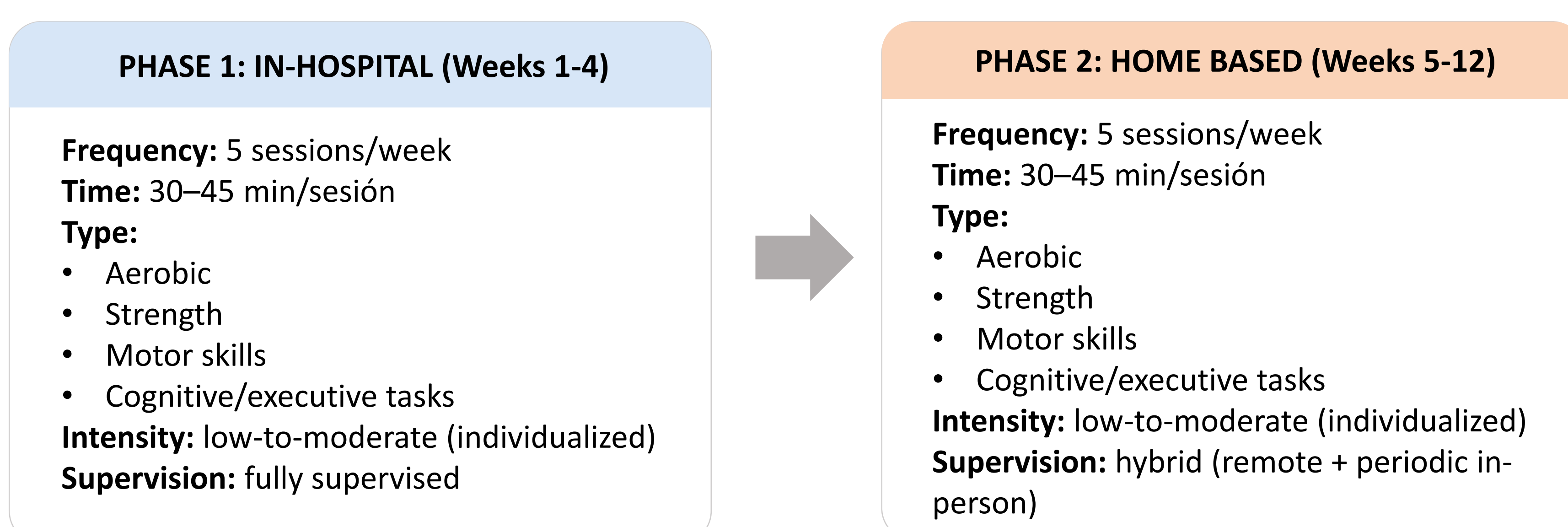
2. STUDY TIMELINE AND PHASES



3. ASSESSMENTS

T0 – BASELINE (Pre-intervention)	T1 – POST PHASE 1 (week 4)	T2 – POST PHASE 2 (week 12)
<ul style="list-style-type: none">• Motor performance: MOON test• Quality of life: PedsQL• Fatigue & pain: PROMIS• Executive function: BRIEF• Physical activity: Godin-Shephard PA questionnaire	<ul style="list-style-type: none">• MOON test• PedsQL• PROMIS• BRIEF• Godin-Shephard PA• Adverse events: CTCAE• Adherence	<ul style="list-style-type: none">• MOON test• PedsQL• PROMIS• BRIEF• Godin-Shephard PA• CTCAE• Adherence• Satisfaction survey

4. INTERVENTION (FIT)



5. ANALYSIS

Descriptive analysis of feasibility outcomes, within-subject changes (T0–T1–T2), and effect size estimation



4. CONCLUSIONS

- This study will provide initial evidence on the feasibility and preliminary impact of an exercise program during the early phase of treatment in children diagnosed with ALL in Uruguay.
- By addressing a critical and understudied stage, particularly in a Latin American context, it may support the integration of exercise into clinical care and contribute to improving functional and psychosocial outcomes in this population.
- The findings will provide a foundation for the design of larger and more robust studies in this field.

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