

# Does vincristine chemotherapy decrease ankle dorsiflexion range of motion and lower extremity function in adults with Acute Lymphoblastic Leukemia?

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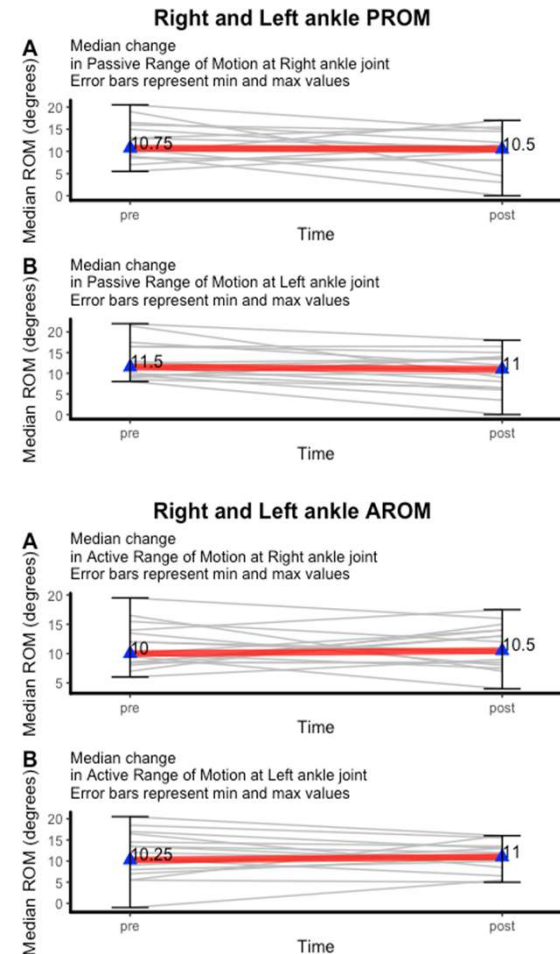
# Research Questions/Methods

**AIMS:** To determine the effect of vincristine on DF-ROM and lower extremity function in adults with Acute Lymphoblastic Leukemia (ALL) treated with vincristine chemotherapy.

**METHODS:** Ankle dorsiflexion ROM was measured using a goniometer and Lower Extremity Functional Scale (LEFS) questionnaire was completed by participants pre & post chemotherapy.

# RESULTS: AROM/PROM

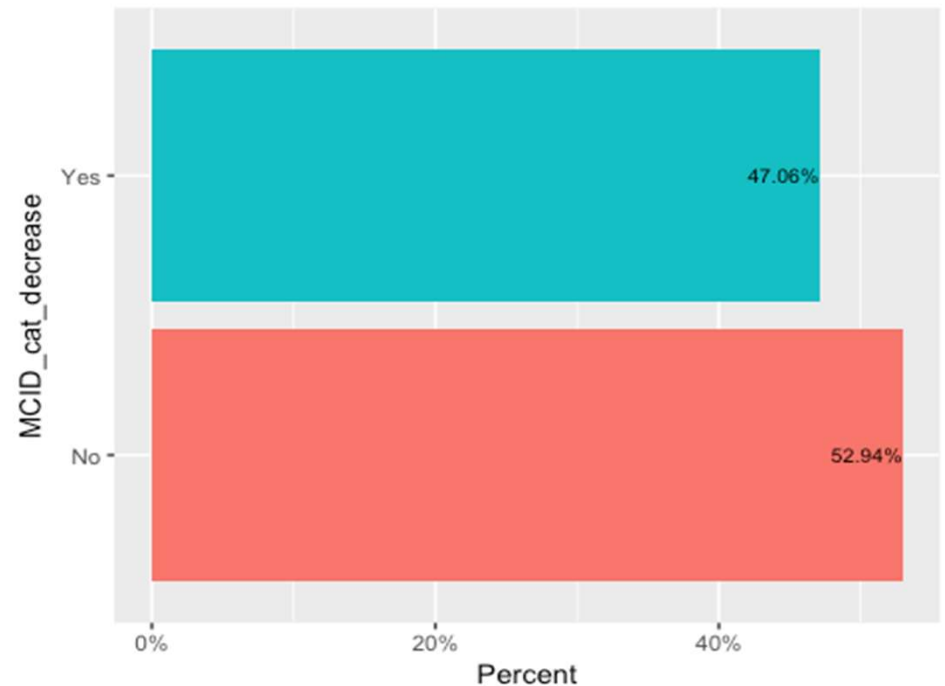
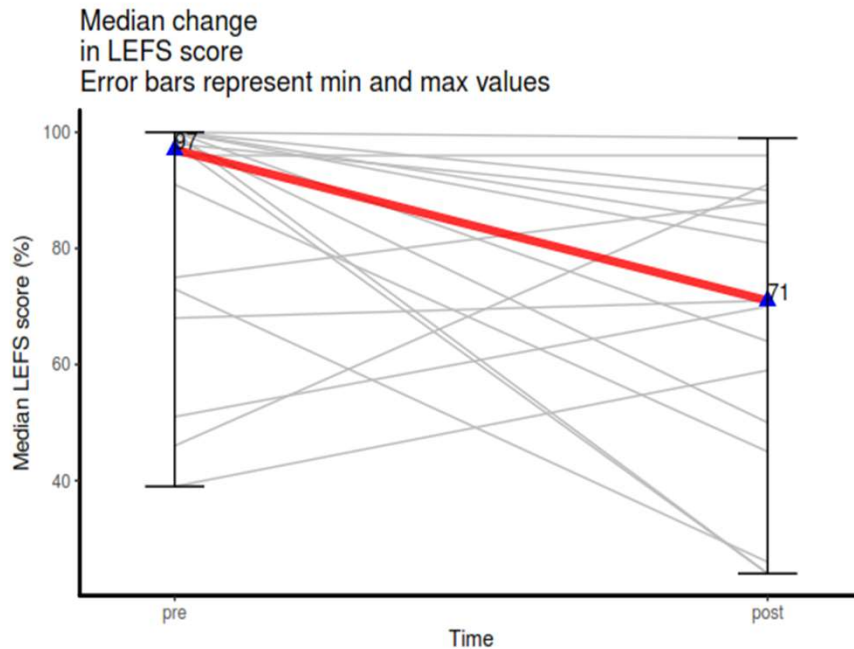
- 18 patients with ALL, age 18+
  - 1 withdrew
  - Female sex 33.3%
  - Median age 42.5 years
  - Pediatric ALL protocol 33.3%
  - Adult ALL protocol 66.7%
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- Passive and Active ROM:  
No statistically significant change after vincristine.



# Results: LEFS Questionnaire

- LEFS reduced by 26% from baseline after vincristine.  
No statistical significance.
- 8/17 participants (47%) indicated a decrease in function which is clinically significant.

Visual trends - LEFS score



## **Discussion & Limitations:**

- Within our study there was no statistically significant change in ankle DF-ROM following vincristine.
- We found a clinically significant decrease in lower extremity function (47%) reported by our participants after chemotherapy.

## **Conclusions & Future Recommendations:**

- Our study confirmed a clinically significant decline in LEFS score in adult ALL patients who received vincristine.
- Larger multi-centre studies are required to strengthen results.
- PT and OT services could be valuable in this group of patients undergoing chemotherapy and should be further studied.