

## An Exercise Intervention for Children and Adolescents Undergoing Anti-Cancer Treatment

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on behalf of the FORTEe Consortium

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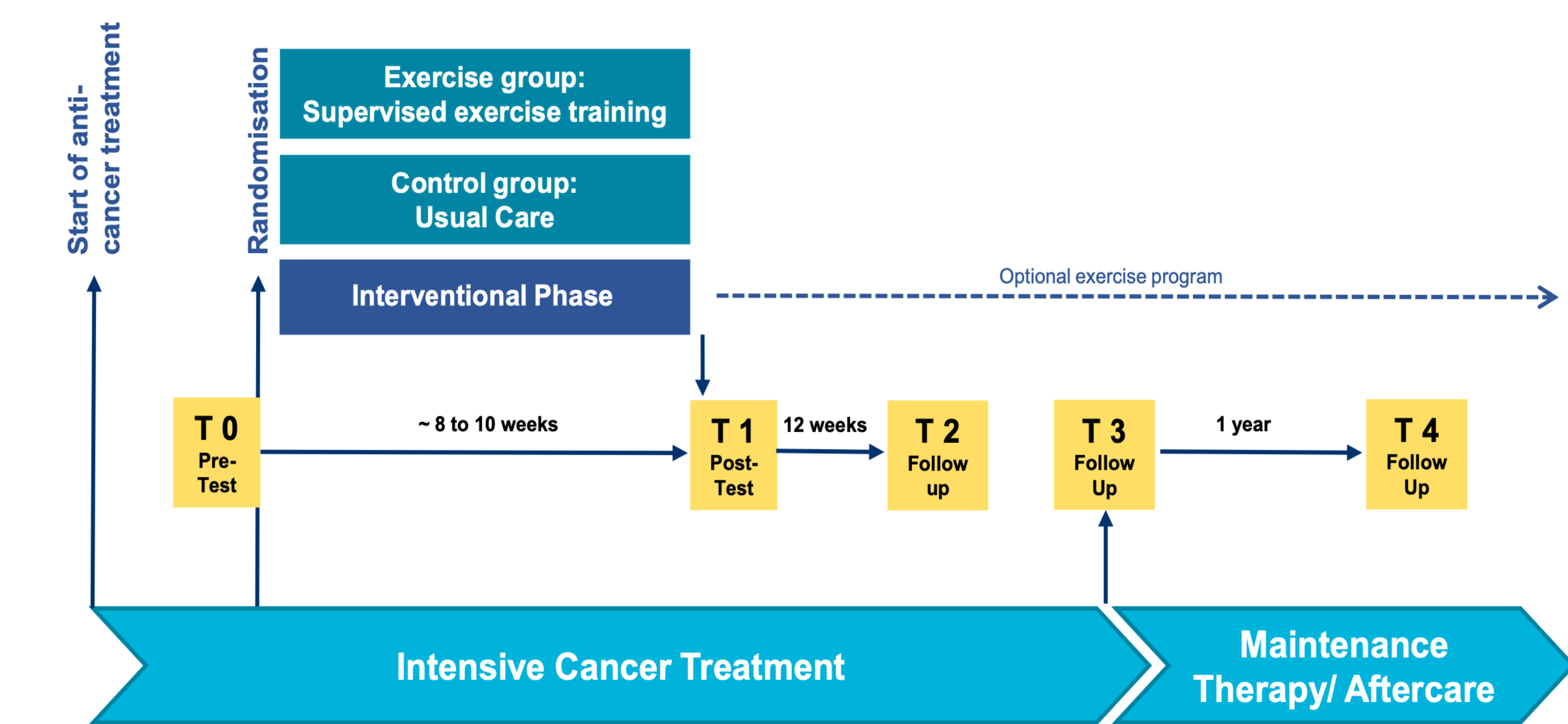
### BACKGROUND

Cancer is the leading cause of death by non-communicable diseases in children in Europe. During cancer treatment, patients' morbidity is increased due to e.g. physical inactivity and cancer-related fatigue. Personalised exercise training during the intensive phase of cancer treatment in children and adolescents is a promising therapy to mitigate above mentioned issues. However, evidence for using exercise to counteract fatigue and improve health-related quality of life is lacking in paediatric oncology.

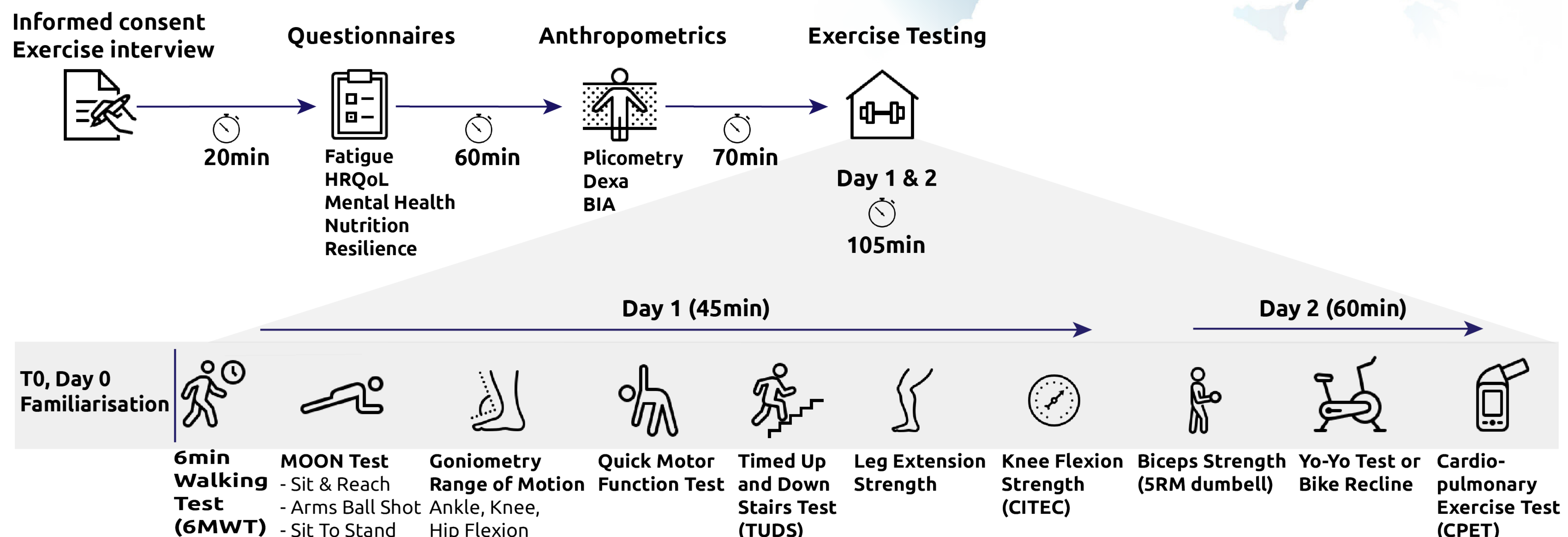
### METHODS

The FORTEe research project intends to evaluate a personalised and standardised exercise intervention in 450 children, adolescents and young adults undergoing cancer treatment in nine centres across Europe. This randomised, controlled multicentre trial aims to generate high evidence for an innovative, patient-centred exercise treatment as part of the standard of care. Experiences and expertise in paediatric exercise oncology within Europe were merged to develop specific exercise training and testing protocols which are to be implemented with the help of digital, innovative technologies.

### STUDY FLOW



### MEASUREMENTS



### RESULTS

The elaborated protocols are standardised to enable adapted personalised exercise training. A meticulous approach to tailored exercise includes a sensitive functional evaluation system to set the appropriate exercise dosage, aiming at defining type, frequency and intensity. Precision exercise training protocols are adapted and personalised to the cancer patient's clinical phenotype. The intensity, time and volume of exercise are adjusted to the cancer treatment intensity and to each patient's clinical condition and response. For this purpose, different modalities are included that allow training sessions in-person but also remotely, supported by innovative technologies.

### CONCLUSION

As a progress beyond the current state-of-the-art, FORTEe has the ambition to **implement paediatric exercise oncology as an evidence-based standard in clinical care** for all childhood cancer patients worldwide.

### CONSORTIUM

