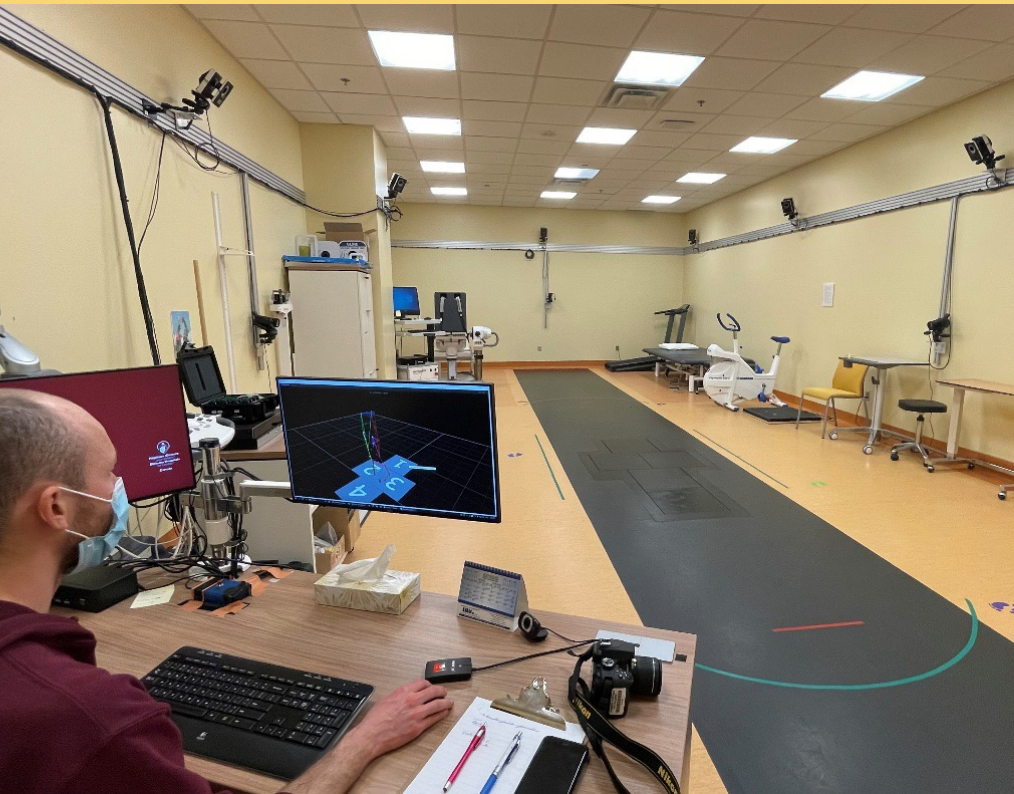


Imaging, Gait, and Clinical Predictors of Pain and Function in Adolescents with Lower Extremity Torsional Abnormalities



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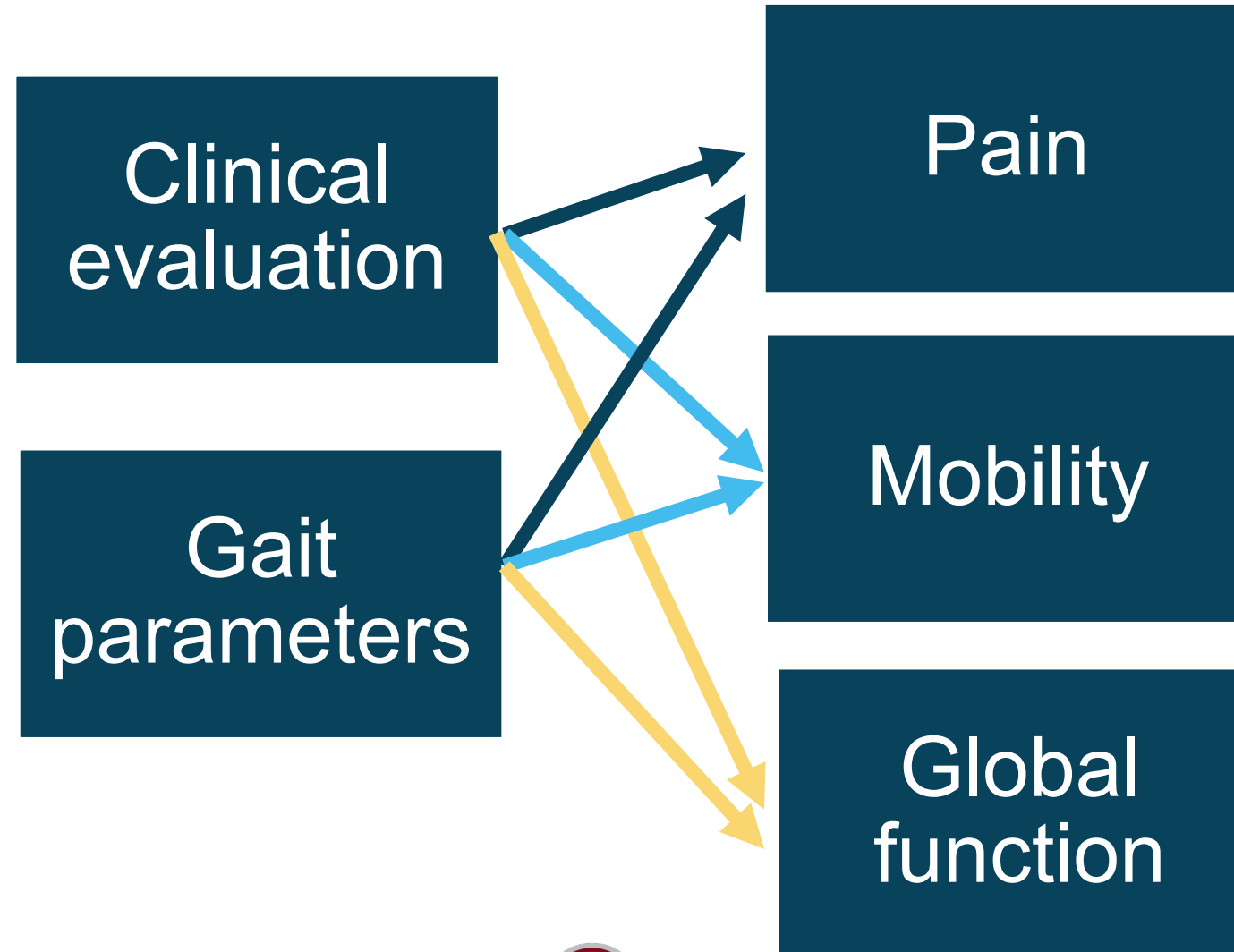


Disclosures

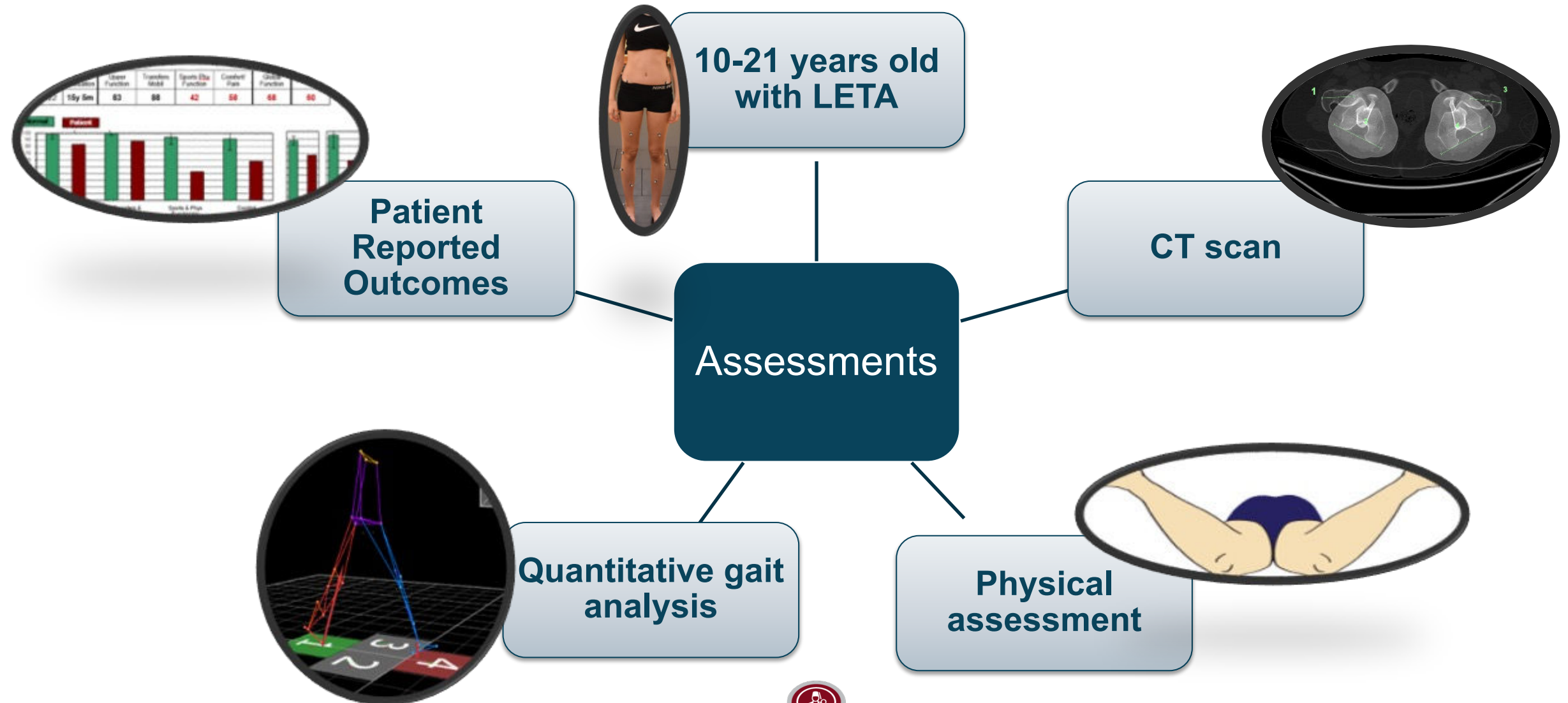
- Marianne Gagnon PhD and Louis-Nicolas Veilleux PhD
 - Nothing to disclose
- Mitchell Bernstein, MD FRCSC
 - Consultant for Smith and Newpew, Nuvasive and Orthofix
 - LLRS president



Which imaging, gait, and clinical parameters are most strongly associated with pain and physical function in adolescents with lower extremity torsional abnormalities (LETA)?



Methods



Participants' information

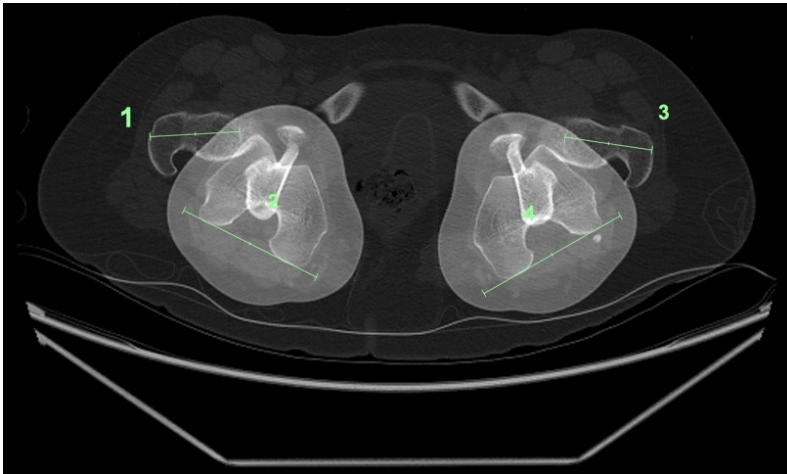
Participants

Total → N=33

- 29 Females
- 4 Males

Age

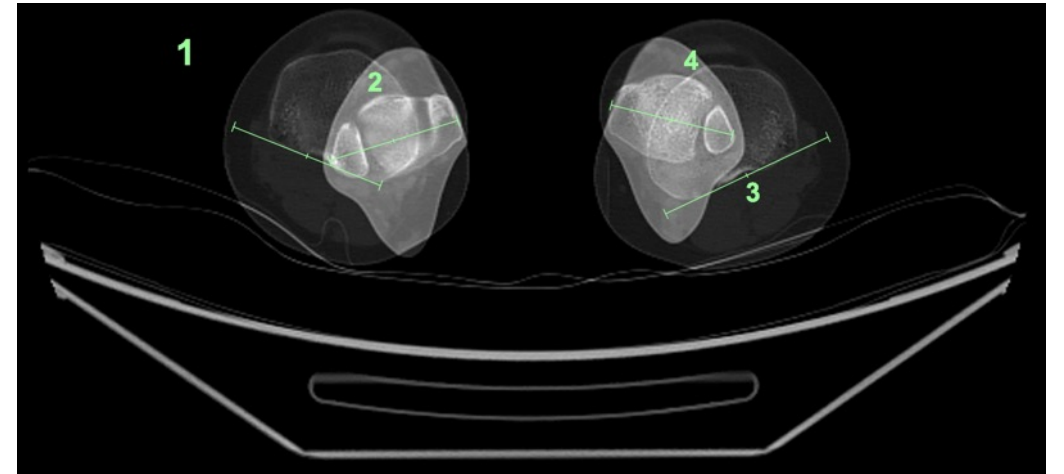
16.6 ± 2.4 years



Femoral anteversion

$29^\circ \pm 9^\circ$

Norms: $12^\circ \pm 4^\circ$



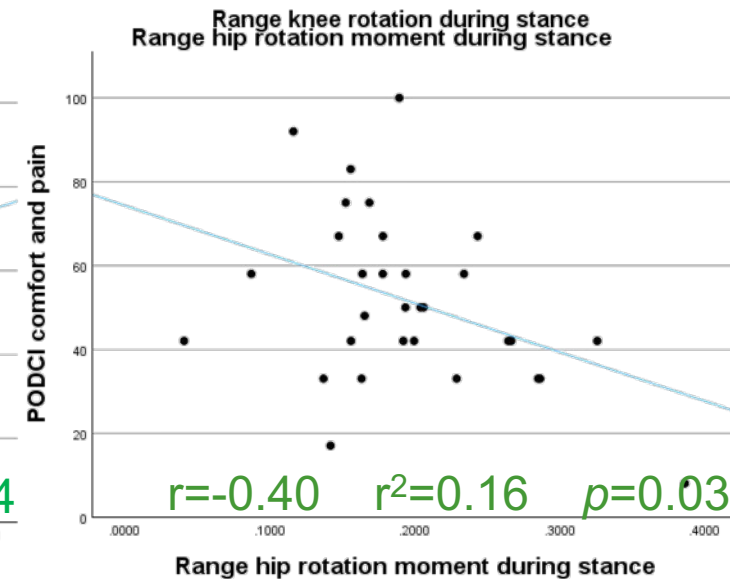
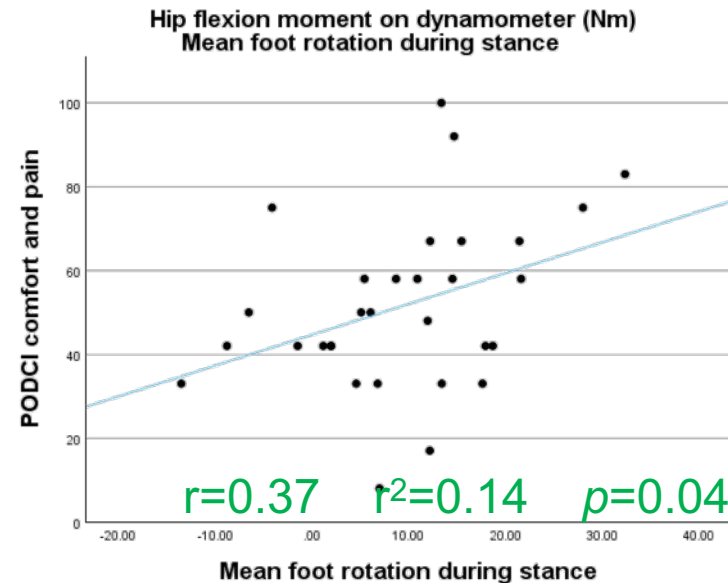
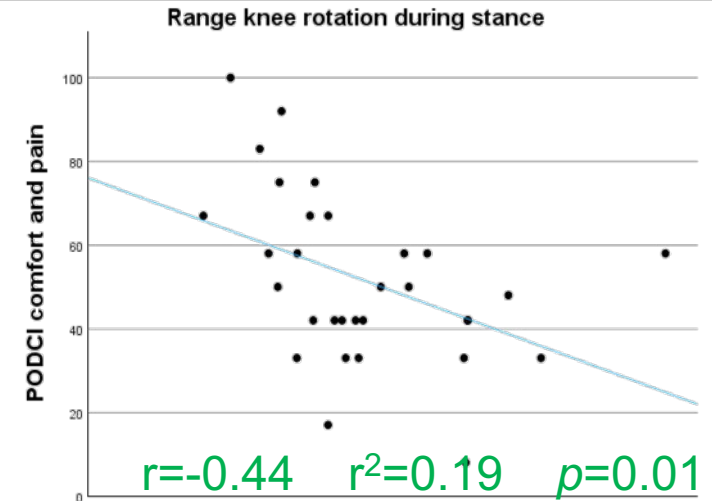
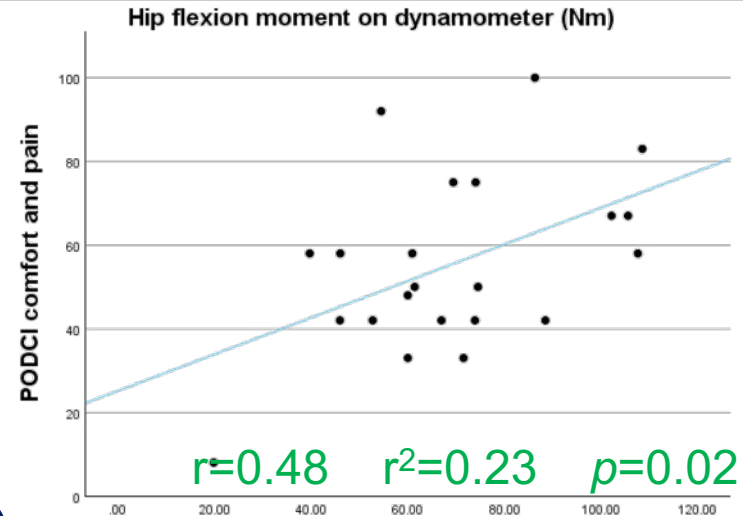
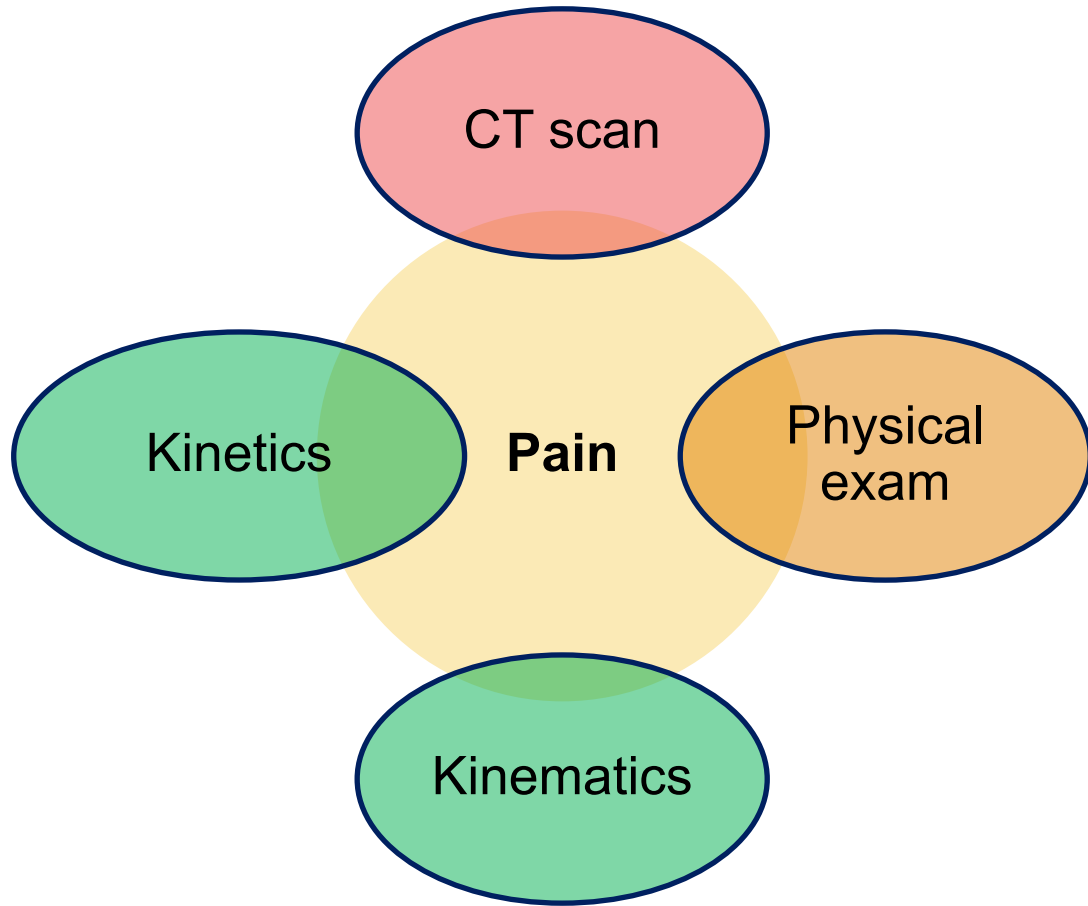
Tibial torsion

$40^\circ \pm 12^\circ$

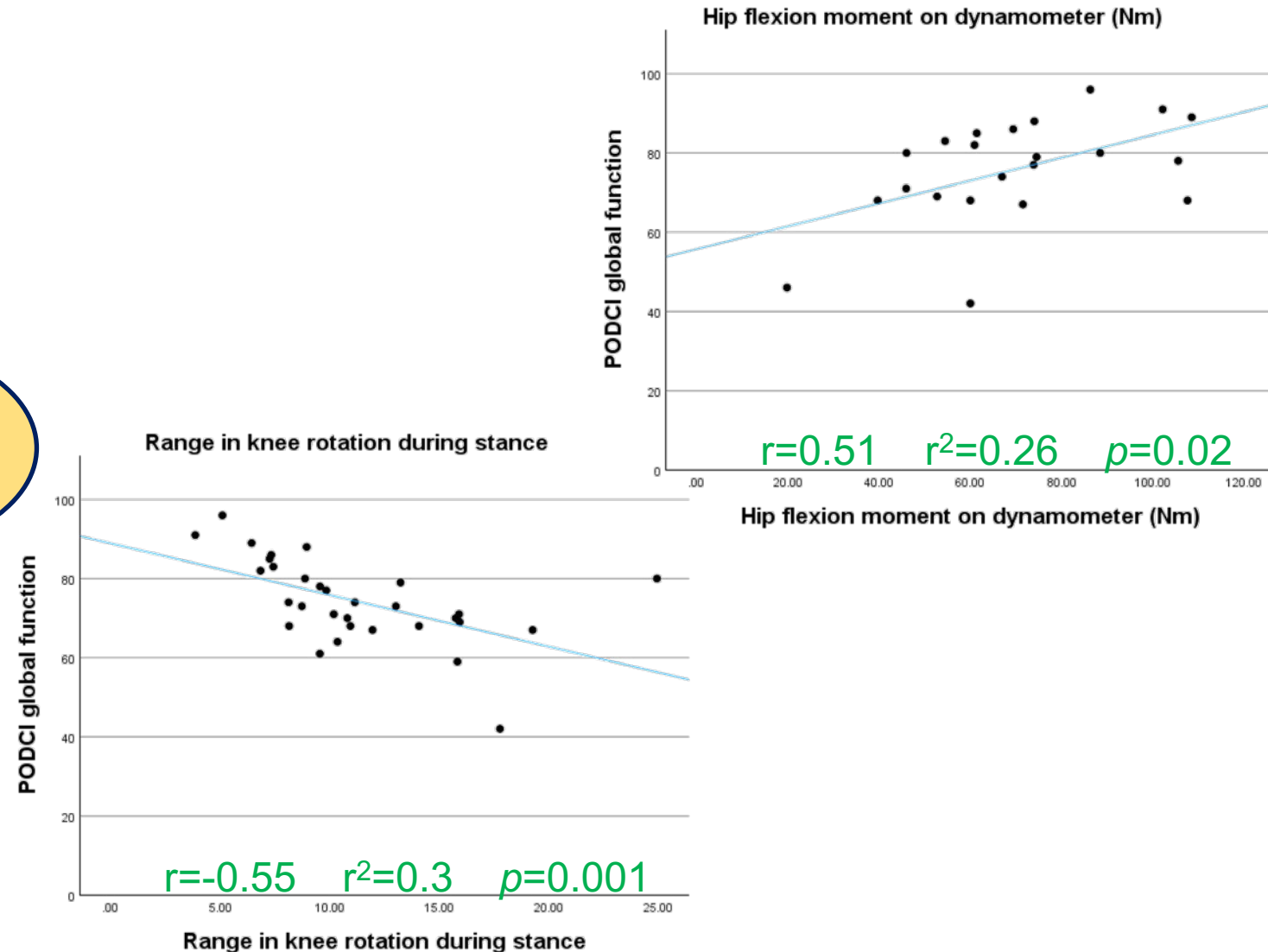
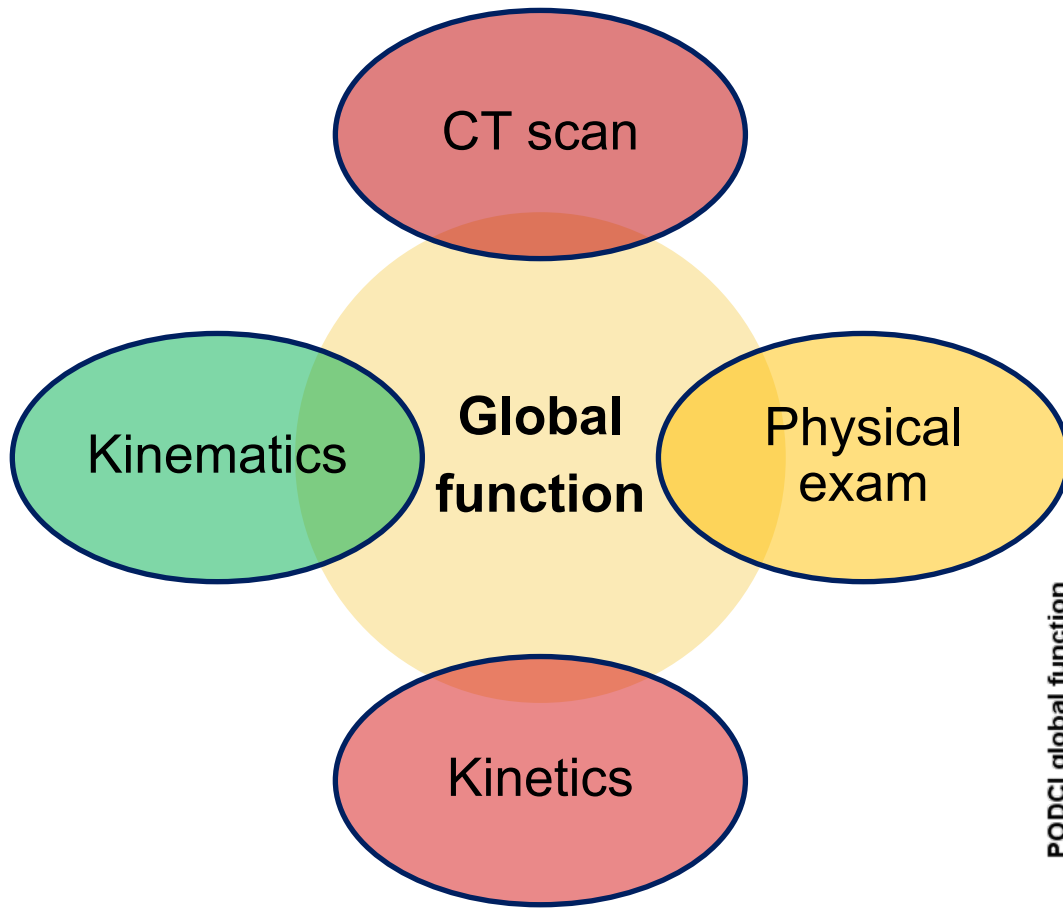
Norms: $26^\circ \pm 4^\circ$



What correlates with the level of pain?



What correlates with the level of global function?



Conclusions

The bone rotational profile on CT scan does not correlate with the level of pain and global function.

Weaker hips flexors are associated with a higher level of pain and lower level of function.

Greater range of knee rotation motion is associated with higher level of pain and lower level of function.

Greater range in the hip rotation moment and a more internal hip rotation moment are associated with higher level of pain, but not with the level of function.

