



INTRODUCTION

- Upper extremity function can be improved in people with cervical spinal cord injury (SCI) through **tendon (TT)** or **nerve transfers (NT)**¹
- TT**: reroute expendable donor tendons to recreate a muscle's function²
 - Advantages: rapid results
 - Disadvantages: prolonged post-operative recovery
- NT**: reroute expendable donor nerves to reinnervate muscle³
 - Advantages: faster post-operative recovery
 - Disadvantages: longer time to see results

PURPOSE

Quantify improvements after TT, NT or no surgery for individuals with tetraplegia

METHODS

INCLUSION CRITERIA

- Age >18
- Mid-level cervical SCI
- AIS A, B, C
- >6mo post-injury

EXCLUSION CRITERIA

- American Spinal Injury Association Impairment Scale (AIS) D

VALIDATED OUTCOME MEASURES

- SCIM**: Spinal Cord Injury Measure
- SF-36**: Short-Form Health Survey⁵

ALL eligible individuals

Treatment Selection

Tendon Transfer (TT)

Nerve Transfer (NT)

No Surgery

FOLLOW-UP EVALUATION

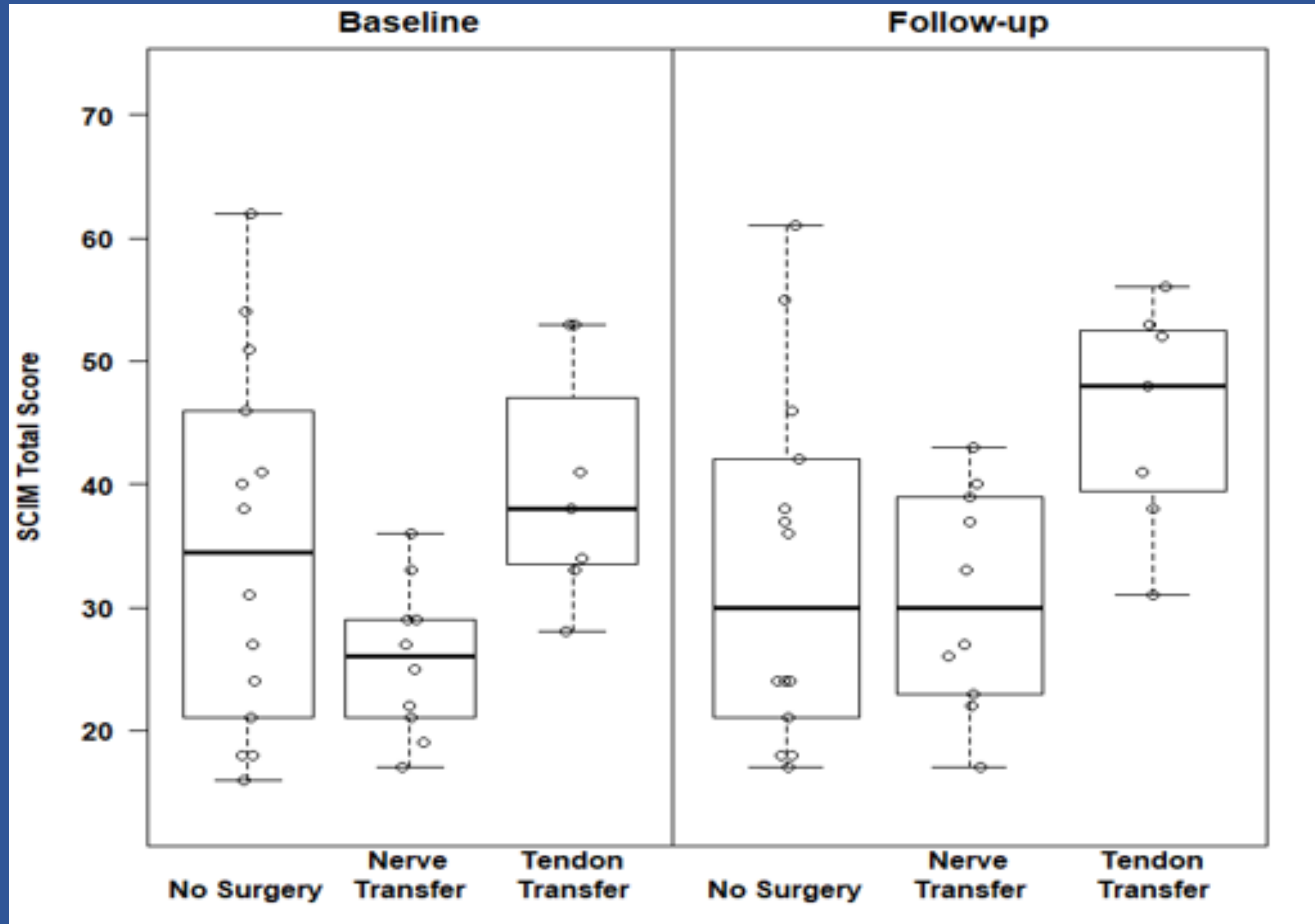
SCIM/ SF-36 Collected

BASELINE EVALUATION

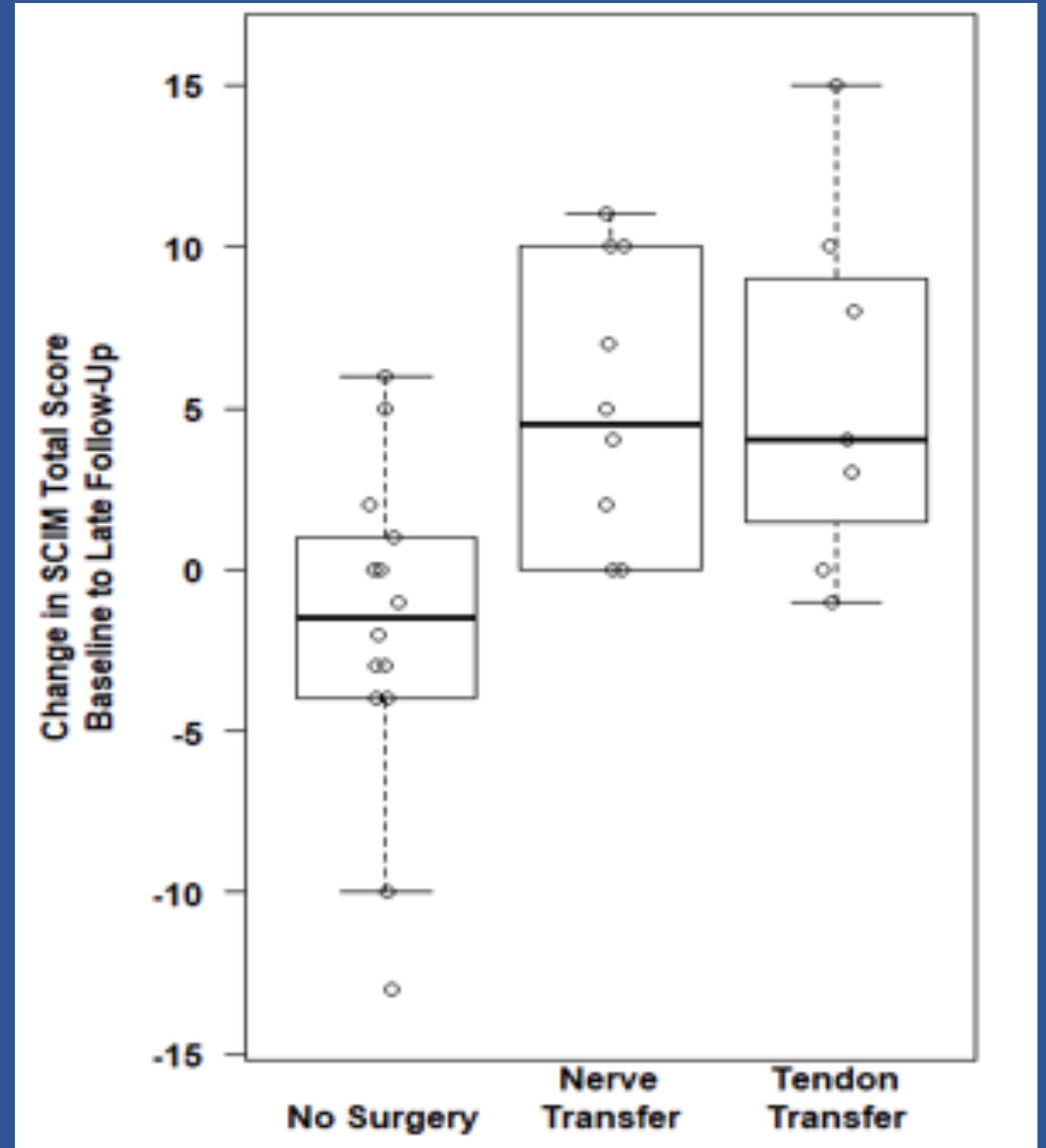
SCIM/ SF-36 Collected

RESULTS

	TT	NT	No Surgery	All
N	7	10	14	31
Mean Follow-up (months)	15.1	24.3	11.3	16.4
Range (min-max)	(7.6-23.7)	(11.3-37.0)	(6.2-16.8)	(6.2-37.0)



SCIM scores at Baseline versus Follow-up: NT started with lower levels of physical functioning at baseline compared to ***both*** the TT and non-surgery groups



Change in SCIM: Both NT + TT groups exhibited gains, not seen in the non-surgery group

No significant changes in SF-36 scores between treatment groups

CONCLUSIONS

- Upper extremity reconstruction via TT or NT led to long-term quantifiable gains in function not seen in the non-surgical group
- These functional gains may encourage people with SCI and their providers to consider ***either*** surgery based on their values, personal preferences, and their unique circumstances

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DISCLOSURES