



ESPRM

European Society of
Physical & Rehabilitation Medicine



ER²
SCHOOL

SantoStefano
RIABILITAZIONE

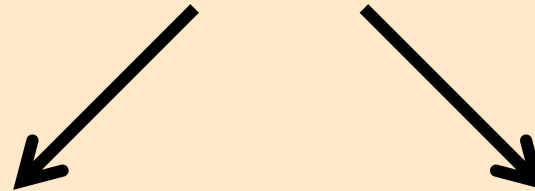
2° European R²S² **Robotic Rehabilitation Summer School**

**Risk of falling and the
consequential way of walking.
Perspectives for new evaluations
and treatment**

Costanza Garruto

SINCE FEBRUARY 2018

61 PATIENTS



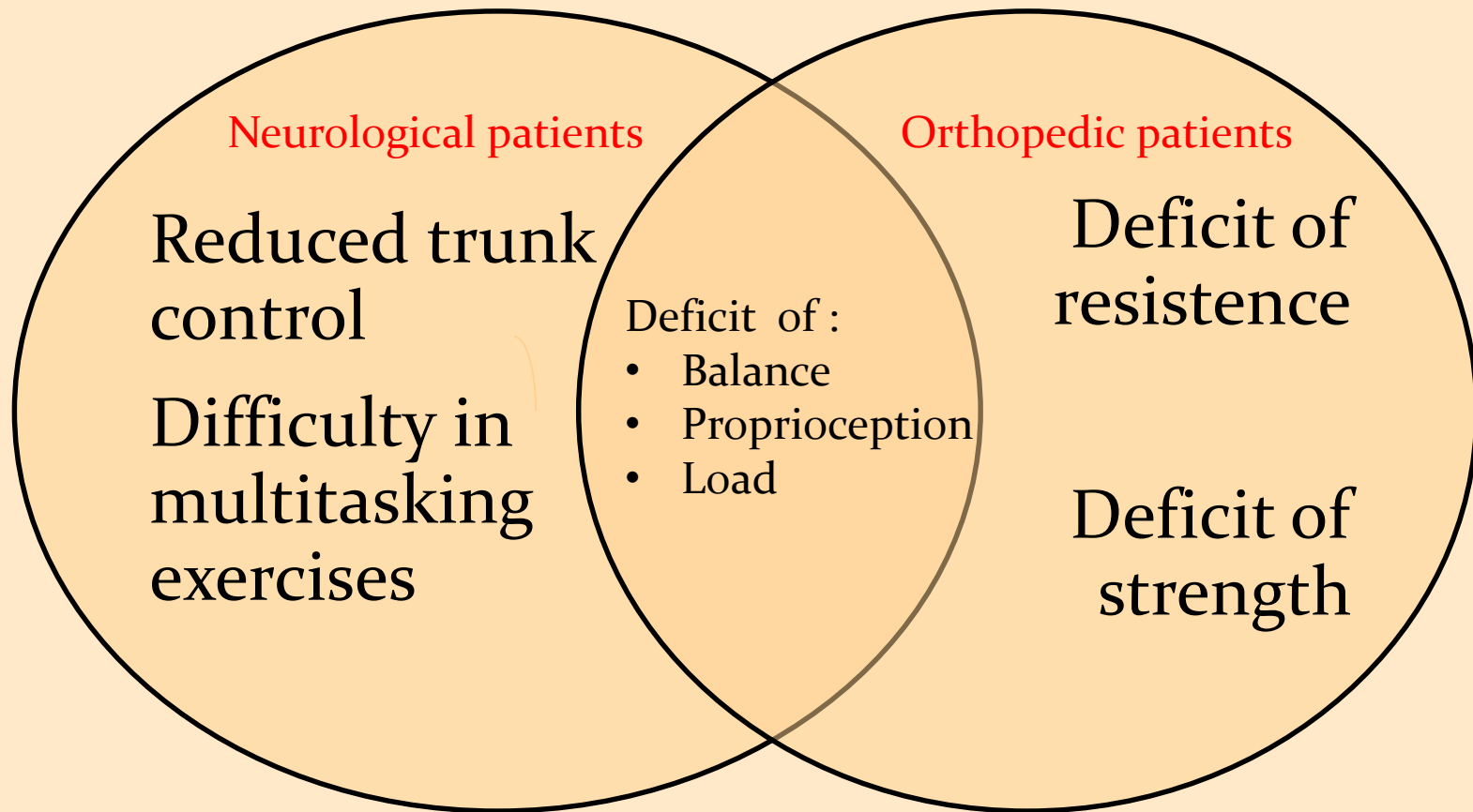
NEUROLOGICAL DISEASE

- Emiparesis
- Paraparesis
- Cerebellar syndrome
- Multiple Sclerosis
- Guillain- Barrè

ORTHOPEDIC DISEASE

- Hip and knee prothesis
- Fractures
- Politraumas
- Ankle traumas

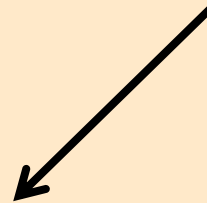
INCLUSION CRITERIA



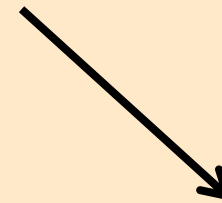
EXCLUSION CRITERIA

- Cognitive compromission
- Height inferior than 1.50m
- Cardiac disease
- Joint stiffness

REHAB PROTOCOL



GIVEN BY THE MACHINE



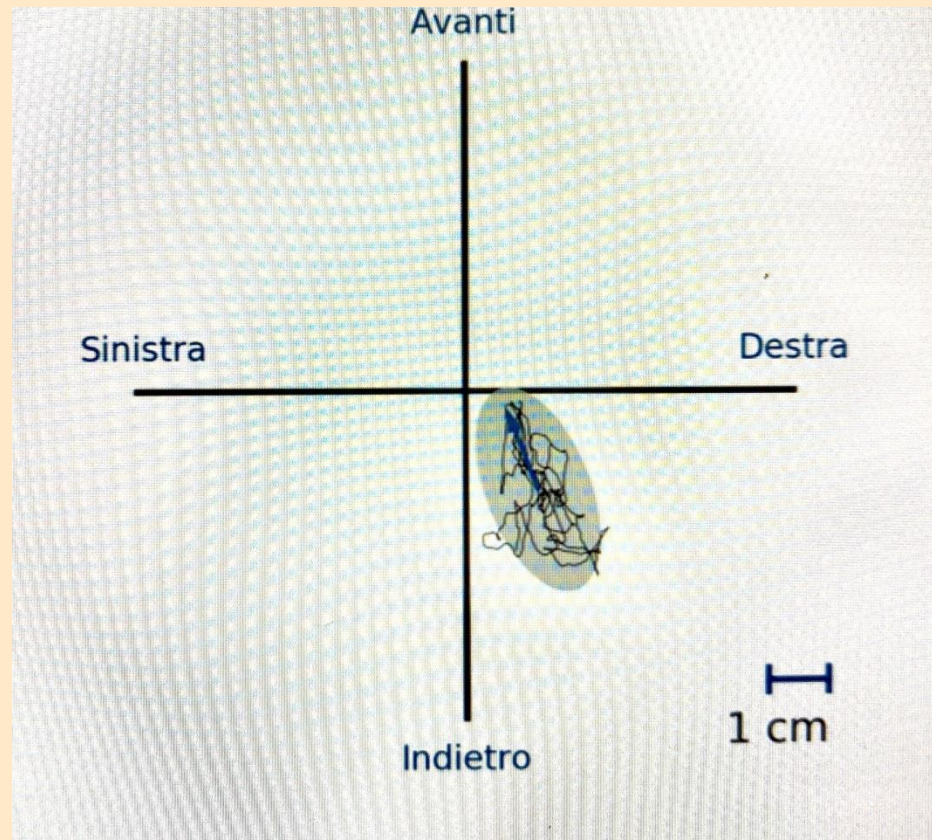
GIVEN BY THE OPERATOR
(MOST COMMON CHOICE)

- Exercises modifiable in length and difficulty
- 20 sessions, 5 times a week

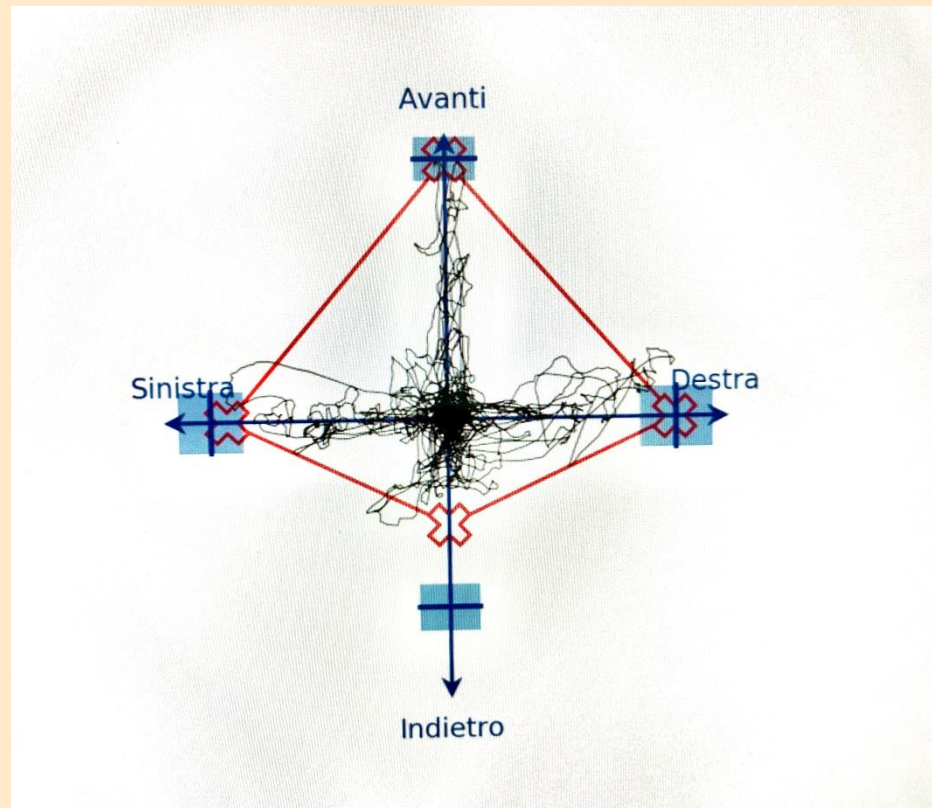
OUTCOME MEASURES

- At the beginning and in the end
- MI; SB; FAC; TCT
- Gait analysis
- Hunova Evaluation: stabilometric test and limits of stability

- Stabilometric test (open/closed eyes)

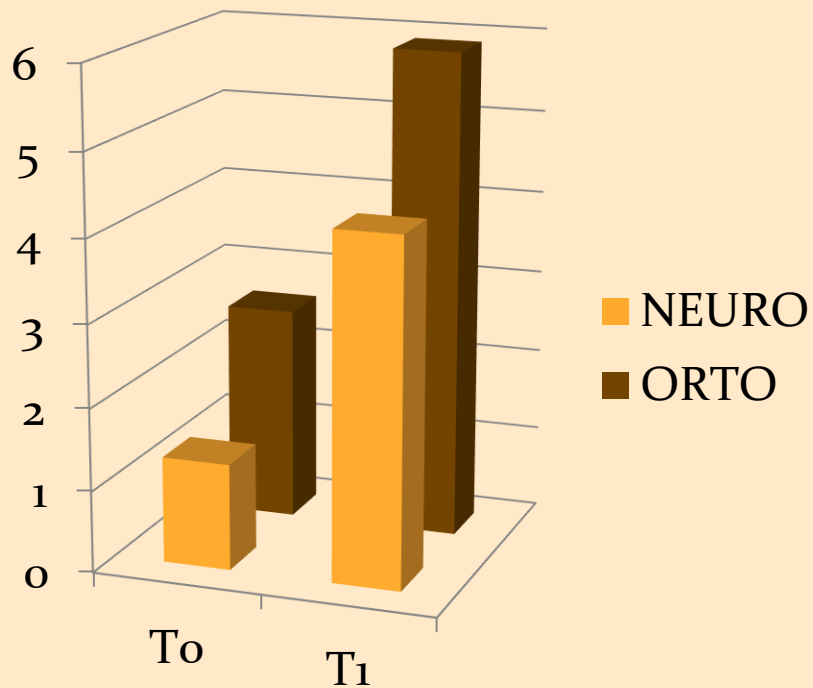


- Limits of stability

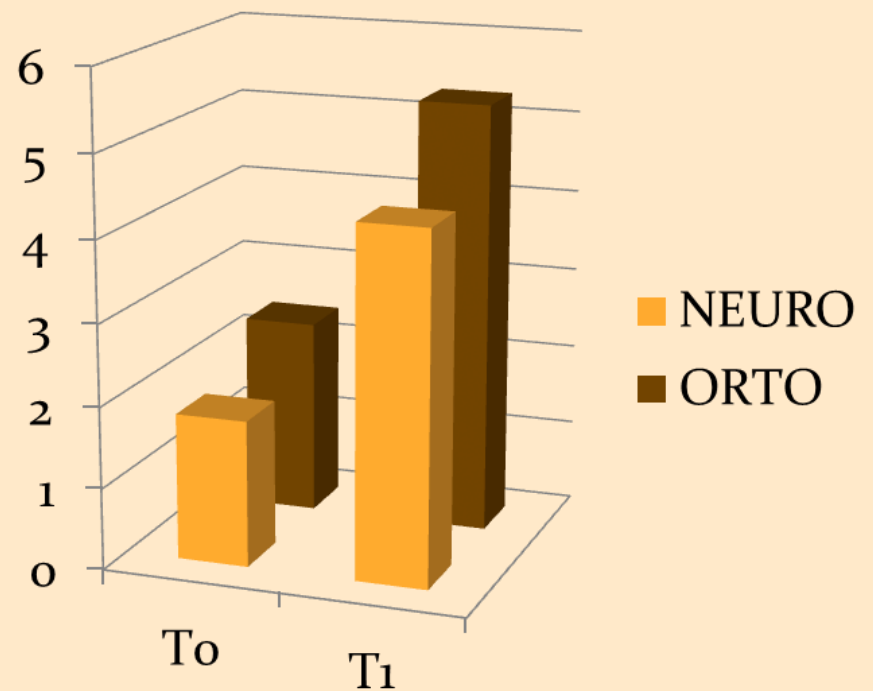


RESULTS

Stabilometric test (OE)



Limits of stability



CONCLUSIONS

- Hunova as support en rehab
- Evidences of recovery
- Personalized and editables protocols

FUTURE GOALS

- Enlarge sample
- New trials

*THANK YOU FOR YOUR
ATTENTION*

Grazie per l'attenzione

