

A stylized graphic on the left side of the slide depicts a human brain with circuit-like lines and three interlocking gears below it, all in a light gray color.

‘A NEW APPROACH TO THE MANAGEMENT OF NEUROPATHIES AND PAIN FROM NEUROREHABILITATION’

SUPPLEMENTARY MATERIAL

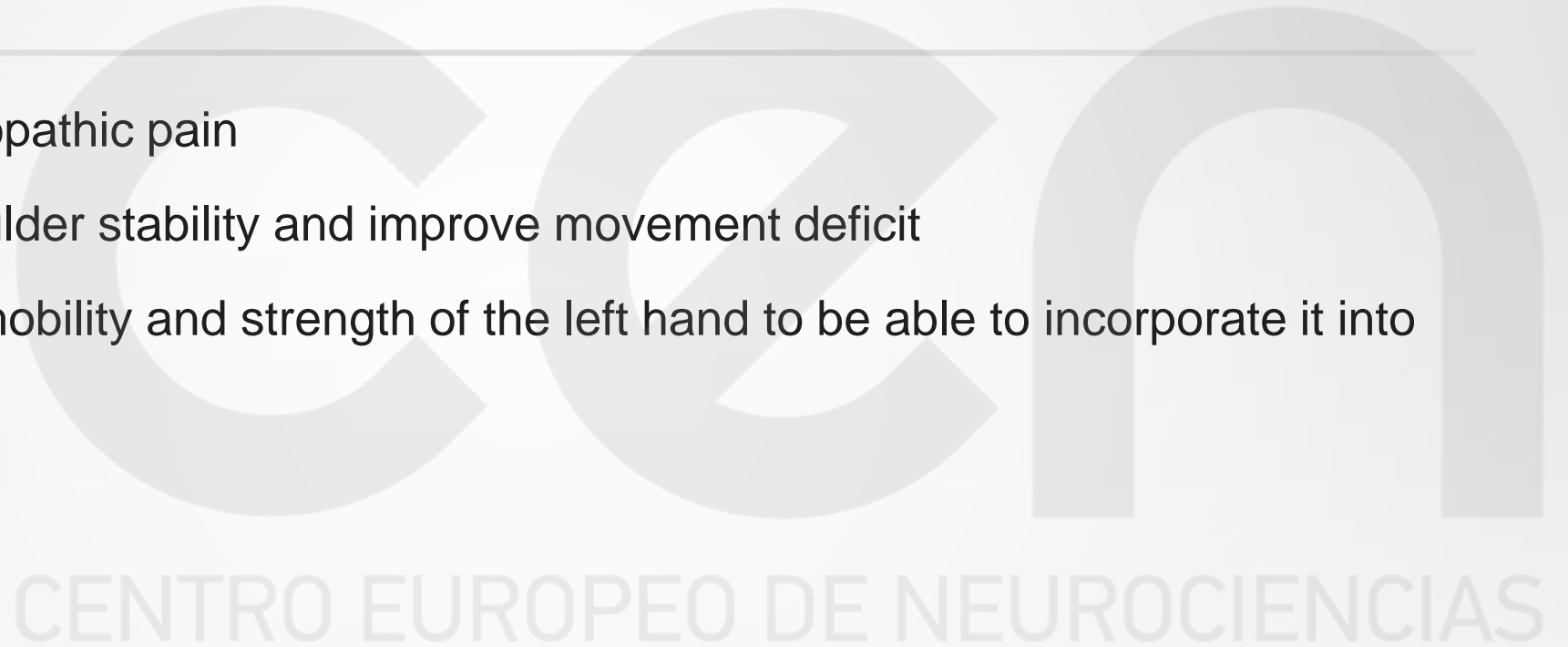
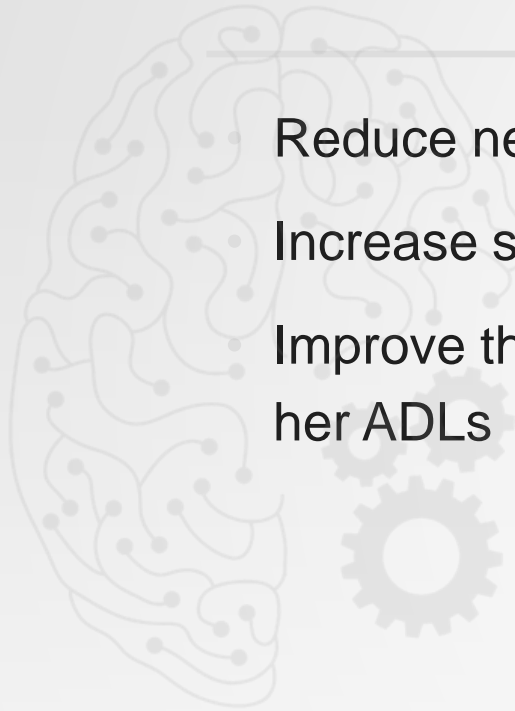
CENTRO EUROPEO DE NEUROCIENCIAS

OBJETIVES

Reduce neuropathic pain

Increase shoulder stability and improve movement deficit

Improve the mobility and strength of the left hand to be able to incorporate it into her ADLs



TREATMENT

Pain management

Strenght training

Functional electrical stimulation

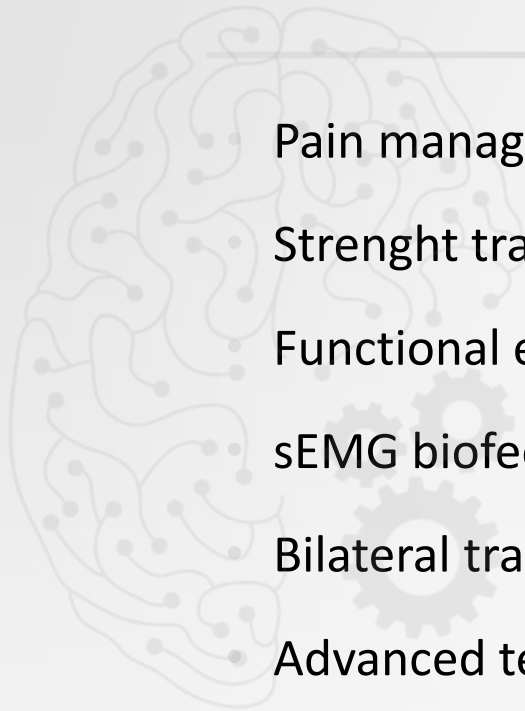
sEMG biofeedback

Bilateral training

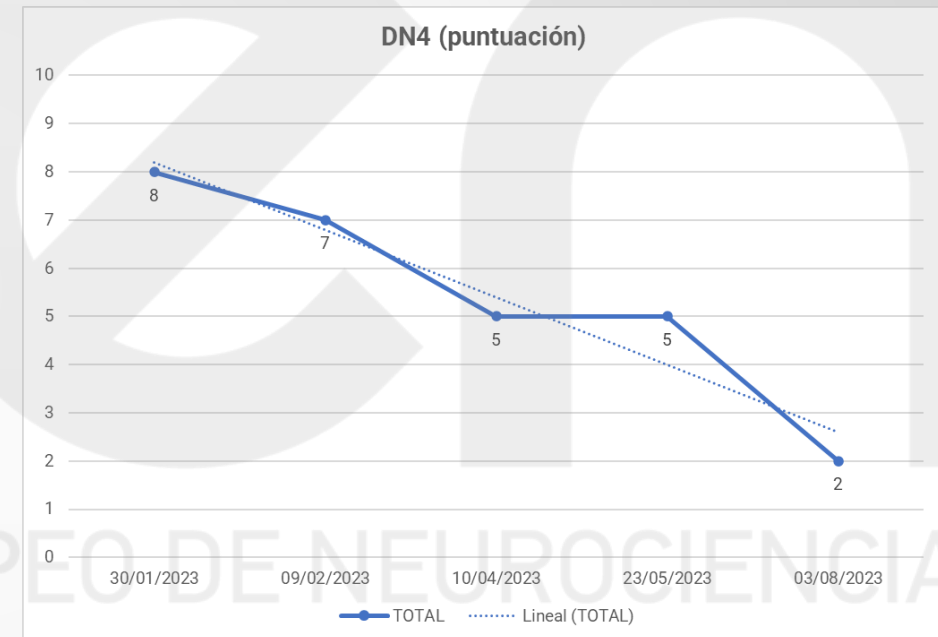
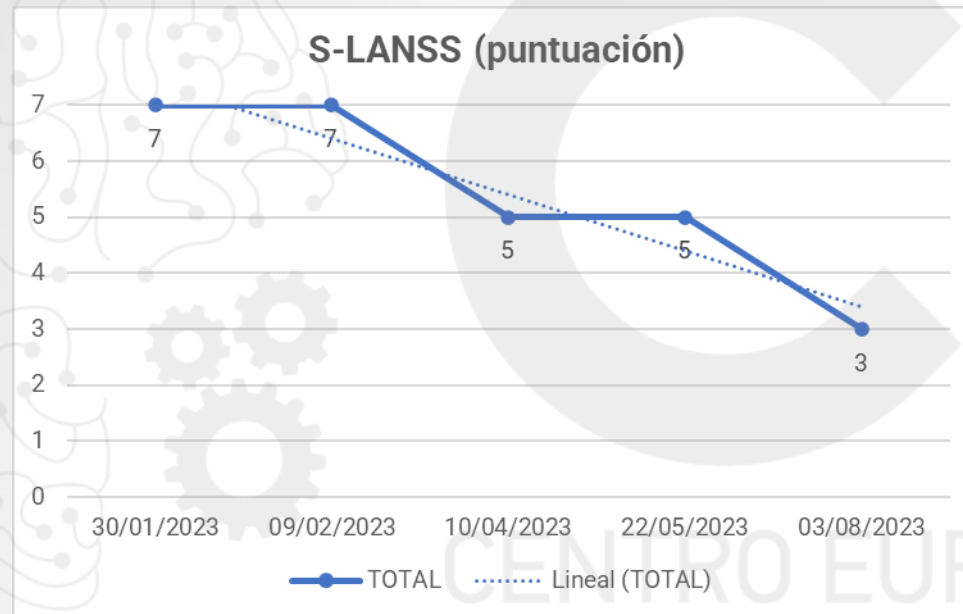
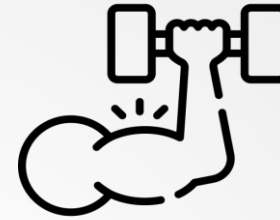
• Advanced technology practice

• Task oriented practice

• Telerehabilitation



DEFICIT - NEUROPATHIC PAIN

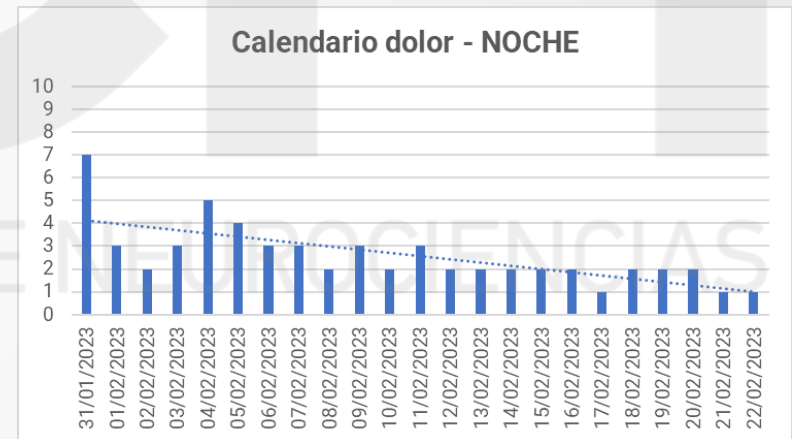
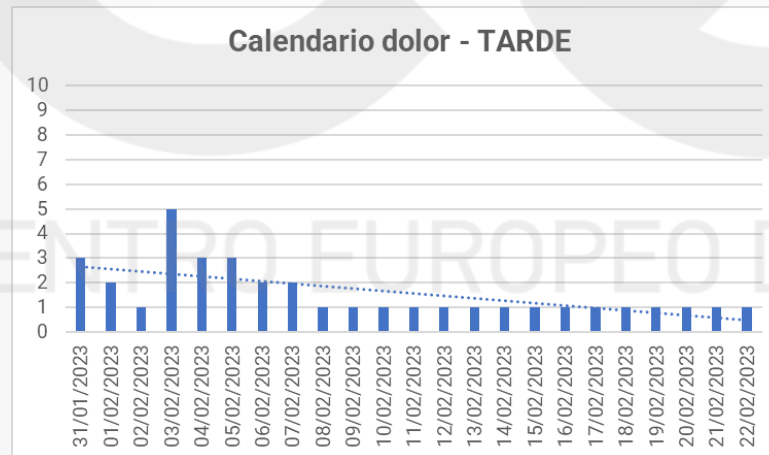
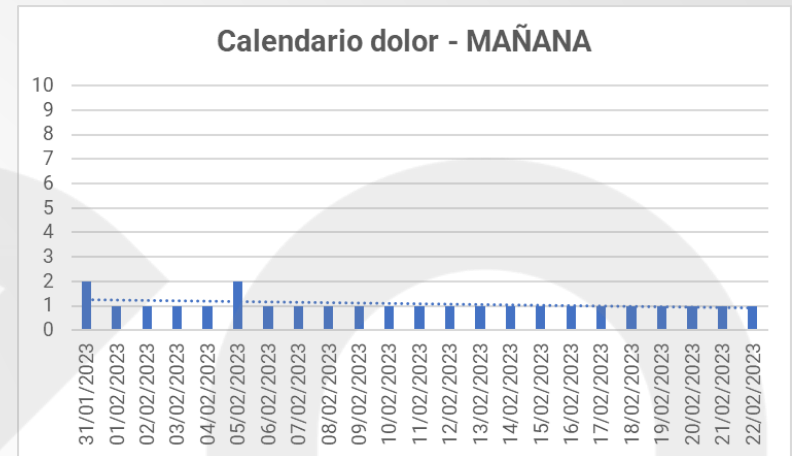


DEFICIT - CALENDAR OF PAIN

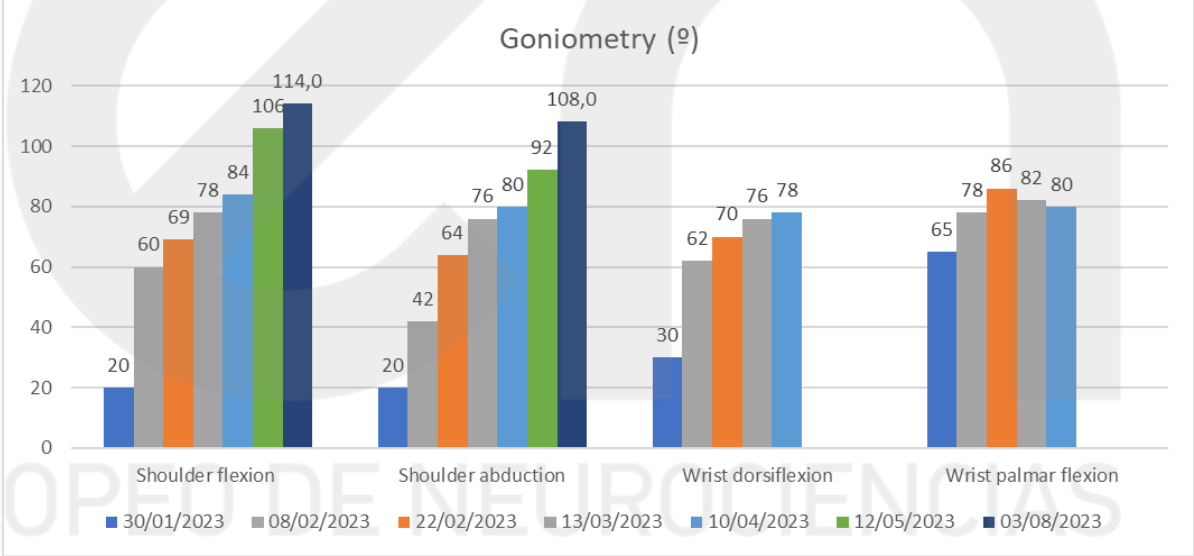
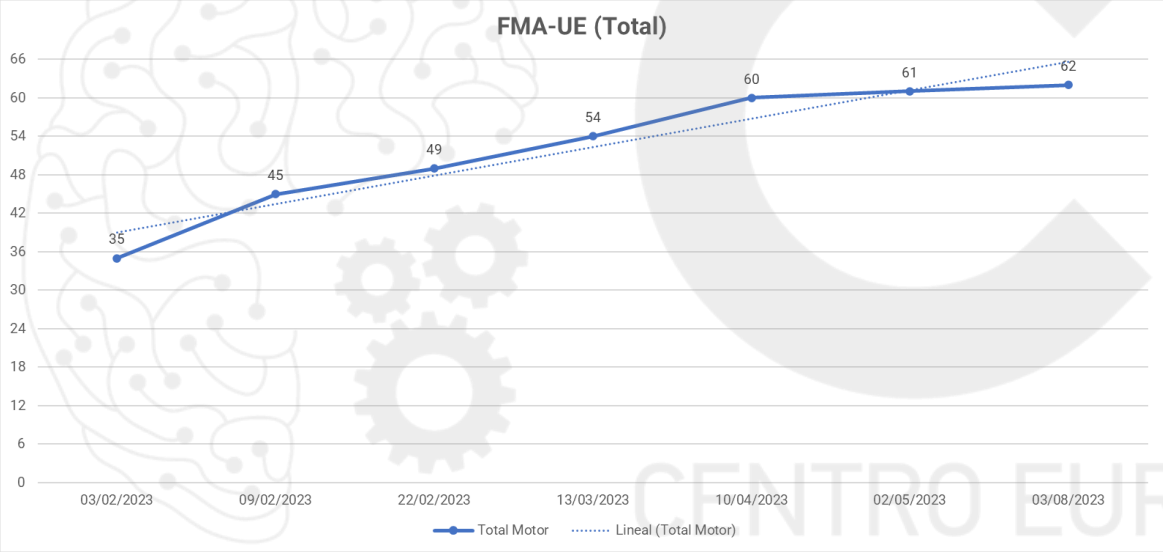
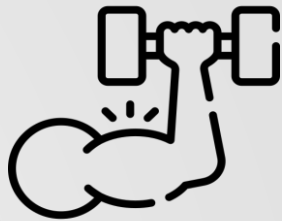


CALENDARIO DE DOLOR - PATRICIA ALONSO

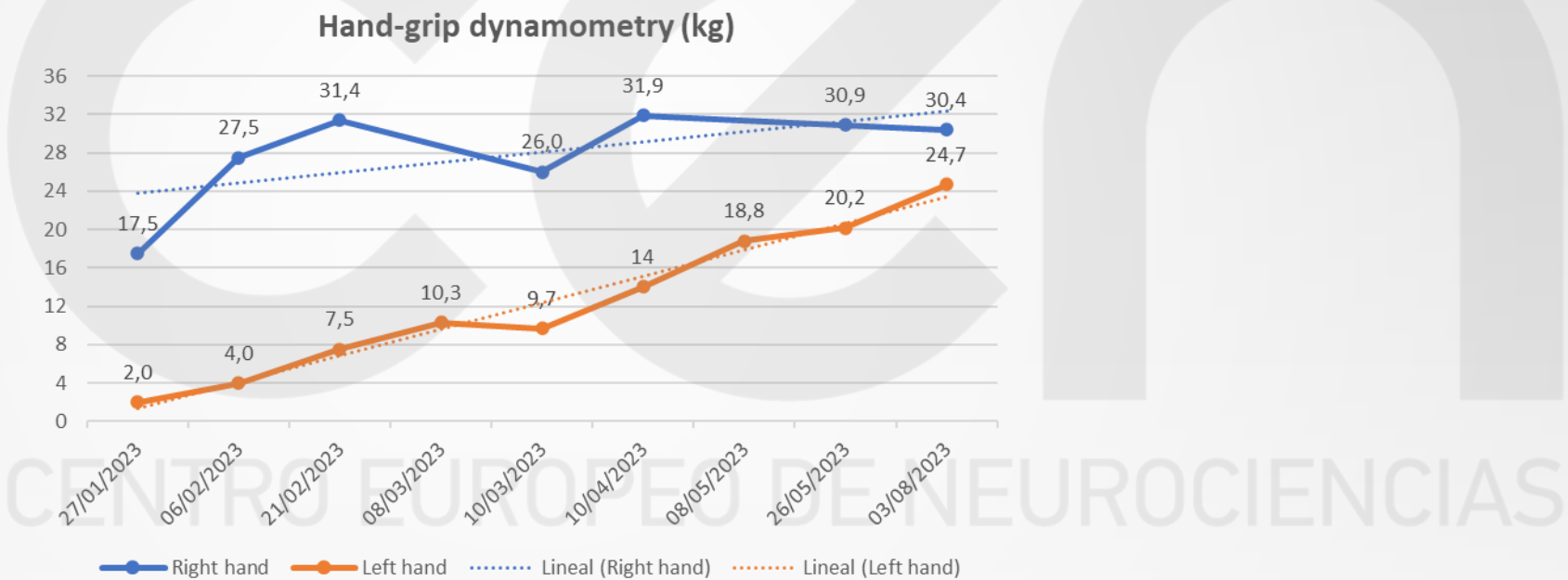
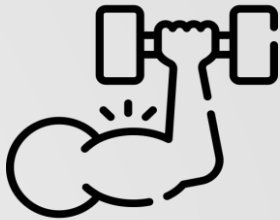
DÍA	MAÑANA	TARDE	NOCHE
31/ENE/2023	2	3	7 ⁸⁻¹⁰
1/FEB/2023	1	2	3 ⁴⁻⁶
2/FEB/2023	1	1	2
3/FEB/2023	1	5*	3*
4/FEB/2023	1	3	5 ⁶⁻⁸
5/FEB/2023	2	3	4*
6/FEB/2023	1	2	3
7/FEB/2023	1	2	3 ⁴
8/FEB/2023	1	1	2
9/FEB/2023	1	1	3*
10/FEB/2023	1	1	2 ³
11/FEB/2023	1	1	2-3 ⁴⁻⁶
12/FEB/2023	1	1	2
13/FEB/2023	1	1	2
14/FEB/2023	1	1	1-2



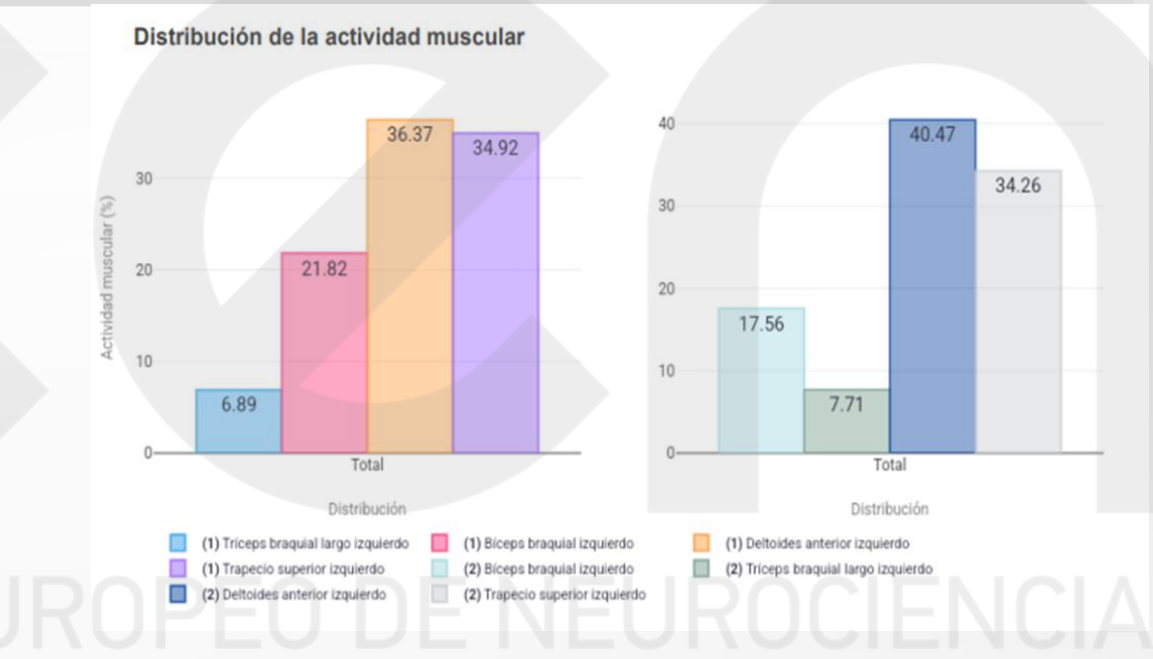
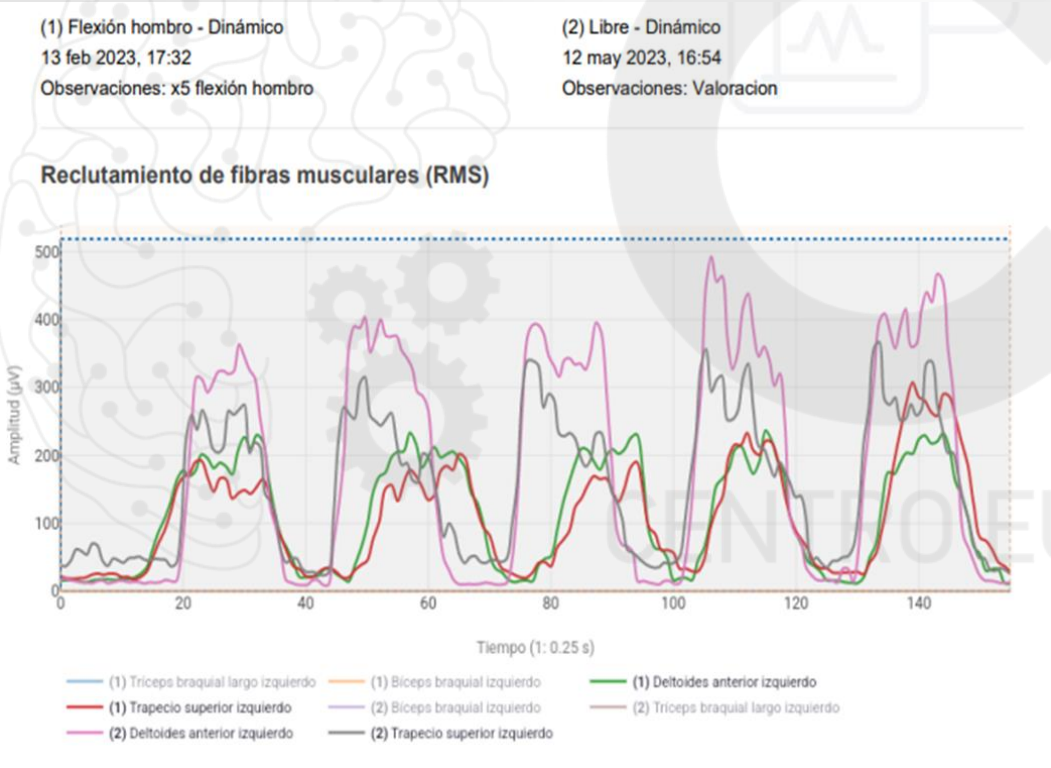
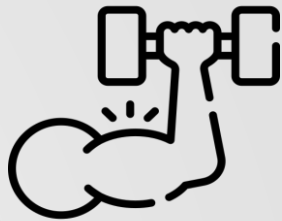
DEFICIT – MOBILITY, STRENGTH AND COORDINATION



DEFICIT – MOBILITY, STRENGTH AND COORDINATION



DEFICIT – MUSCLE ACTIVATION IN SHOULDER FLEXION

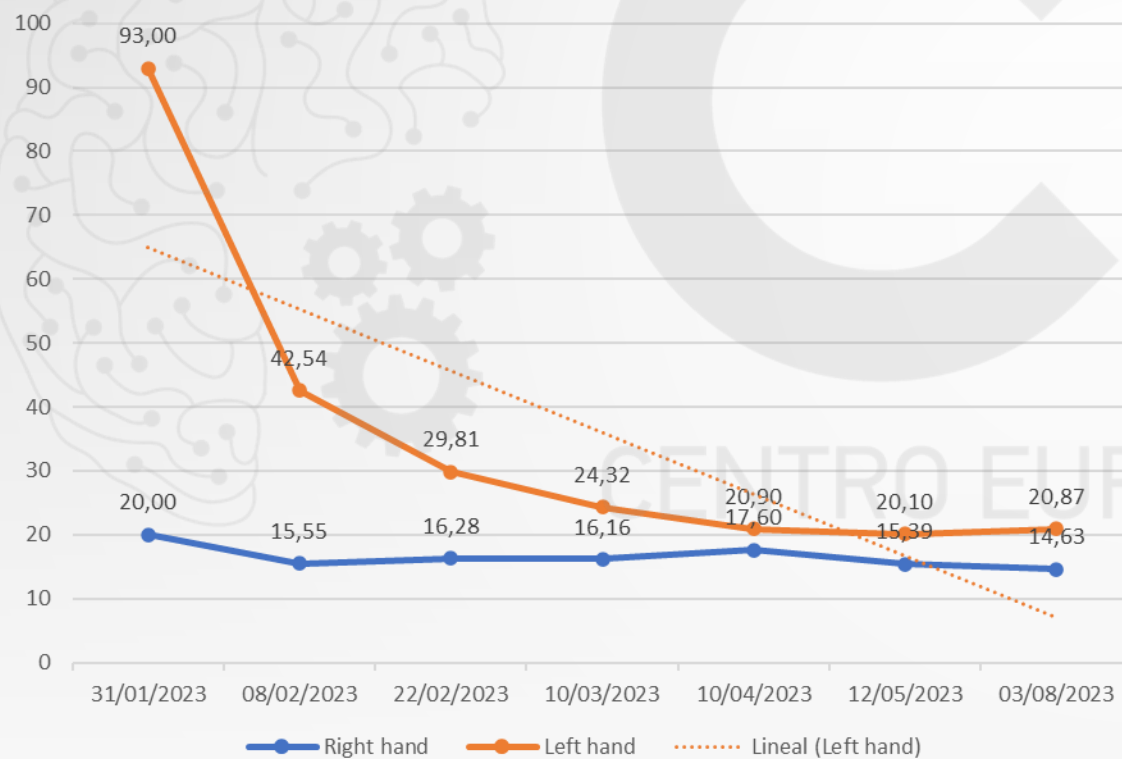


Selección	RMS medio	RMS medio por segundo	Máx. contracción tramo	Máx.contracción referencia
(1) Tríceps braquial largo izquierdo	21.31 µV	0.55 µV/s	50.97 µV	50.97 µV
(1) Bíceps braquial izquierdo	67.49 µV	1.73 µV/s	159.31 µV	159.31 µV
(1) Deltoides anterior izquierdo	112.49 µV	2.88 µV/s	236.72 µV	236.72 µV
(1) Trapecio superior izquierdo	108.01 µV	2.77 µV/s	307.48 µV	307.48 µV
(2) Bíceps braquial izquierdo	78.87 µV	1.68 µV/s	214.91 µV	159.31 µV
(2) Tríceps braquial largo izquierdo	34.62 µV	0.74 µV/s	72.68 µV	50.97 µV
(2) Deltoides anterior izquierdo	181.78 µV	3.87 µV/s	492.57 µV	236.72 µV
(2) Trapecio superior izquierdo	153.90 µV	3.27 µV/s	366.41 µV	307.48 µV

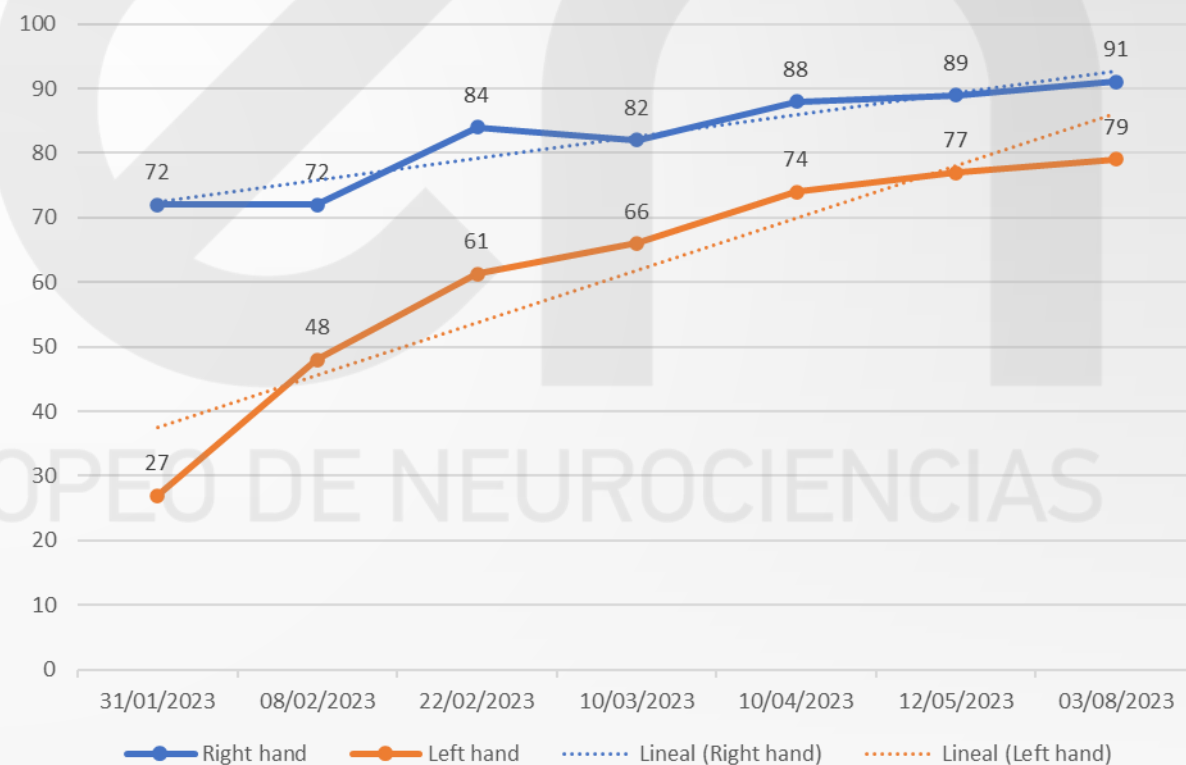
ACTIVITY



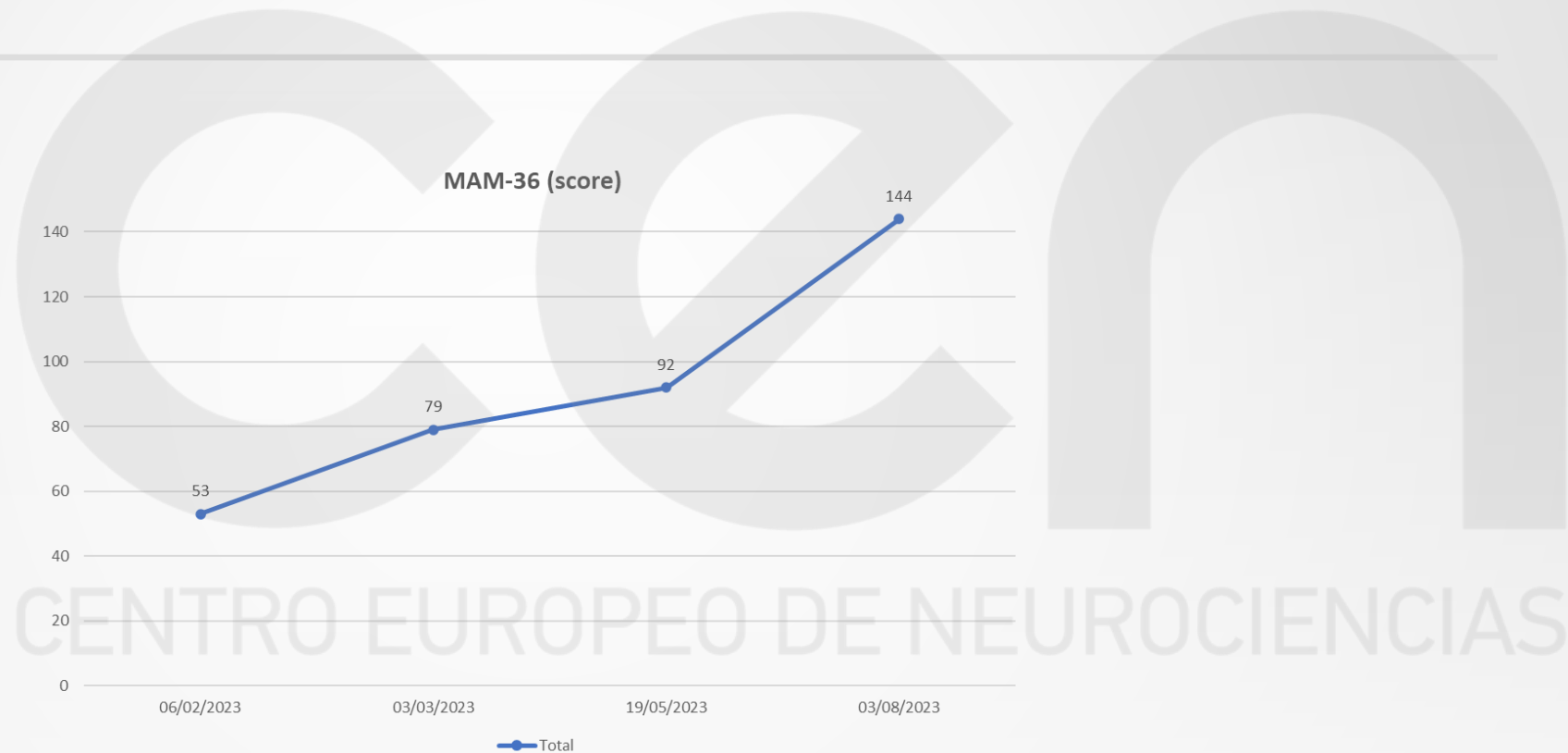
NHPT (secs)



BBT (blocks)



ACTIVITY



PARTICIPATION - GOAL ATTAINMENT SCALE



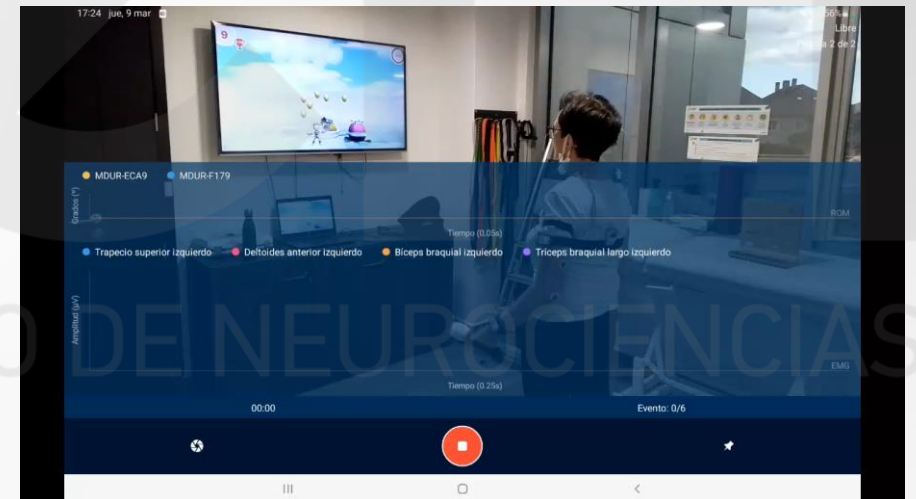
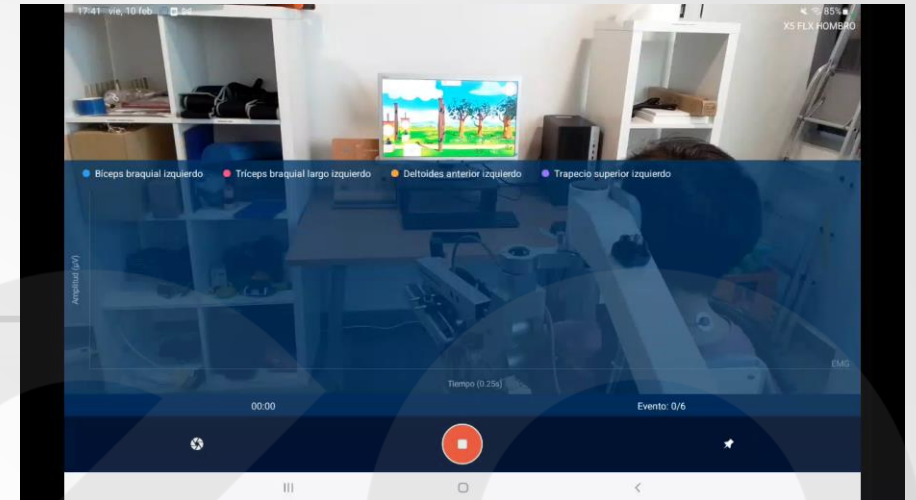
Level of Expected OUTCOME 3 months after the course	Rating
MUCH MORE Than EXPECTED	+2
MORE than EXPECTED	+1
EXPECTED Outcome	0
LESS than EXPECTED	-1
MUCH LESS Than EXPECTED	-2

Goal Attainment Scale	-2 MUCH LESS than EXPECTED	-1 LESS than EXPECTED	0 EXPECTED	+1 MORE than EXPECTED	+2 MUCH MORE than EXPECTED
Work	Not return to work	Part time return to work	Adaptated job		Fully return to work with no adaptations
Hobbies (Photography, crafting)	Not return to hobbies	Return with assitance of another person	Adaptated	No adaptations	Fully return to hobbies with no adaptations
Driving	Not be able to drive		Drive short distances		Drive long distances without limitations

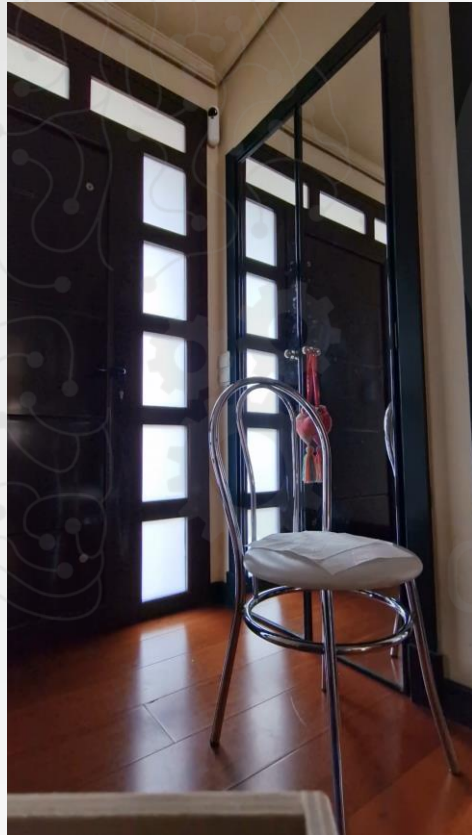
BASELINE



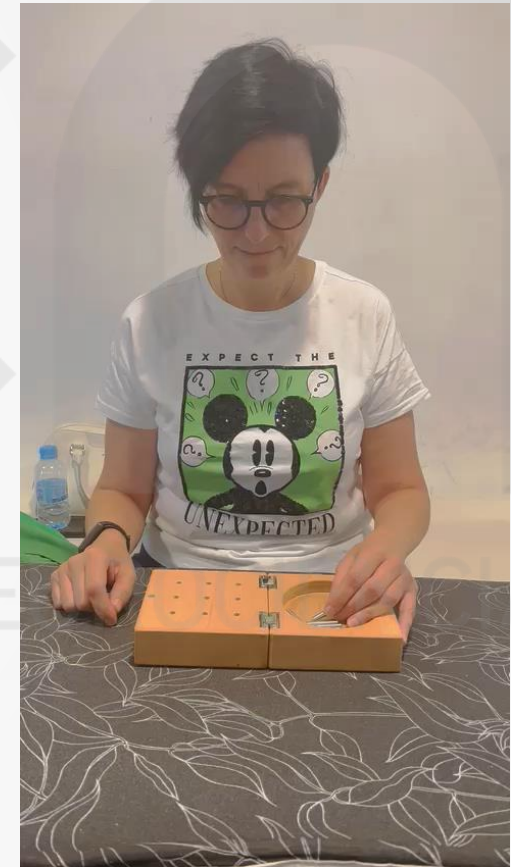
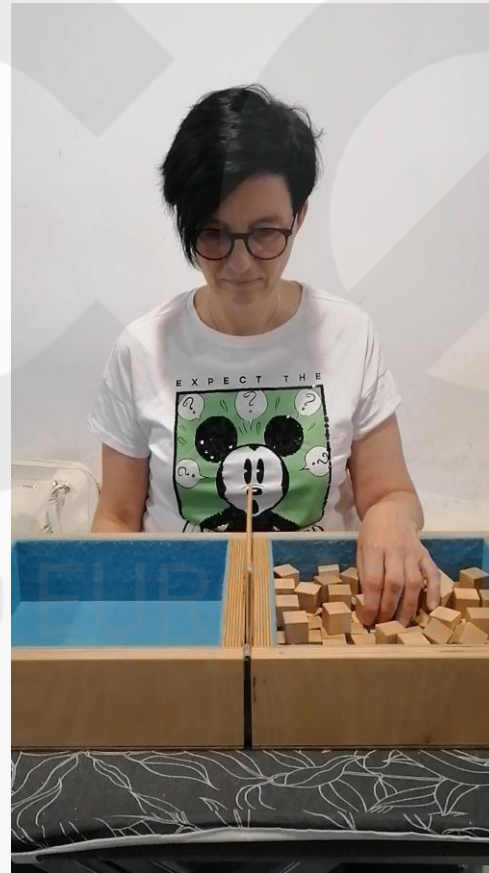
TREATMENT



TREATMENT



POST TREATMENT



MORE INFORMATION

- Video - <https://www.youtube.com/watch?app=desktop&v=HaE5zHuK13Q>
- Radio interview - https://www.cope.es/actualidad/sociedad/noticias/cada-adultos-viven-con-dolor-que-cronico-para-tercio-ellos-20230412_2651947
- Digital newspaper video - <https://www.vozpopuli.com/sanidad/neurologia-amputar-brazo-recuperar-vida.html>
- CEN neuropathic pain post - <https://www.eneurocenter.com/tratamiento-del-dolor-neuropatico/>



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