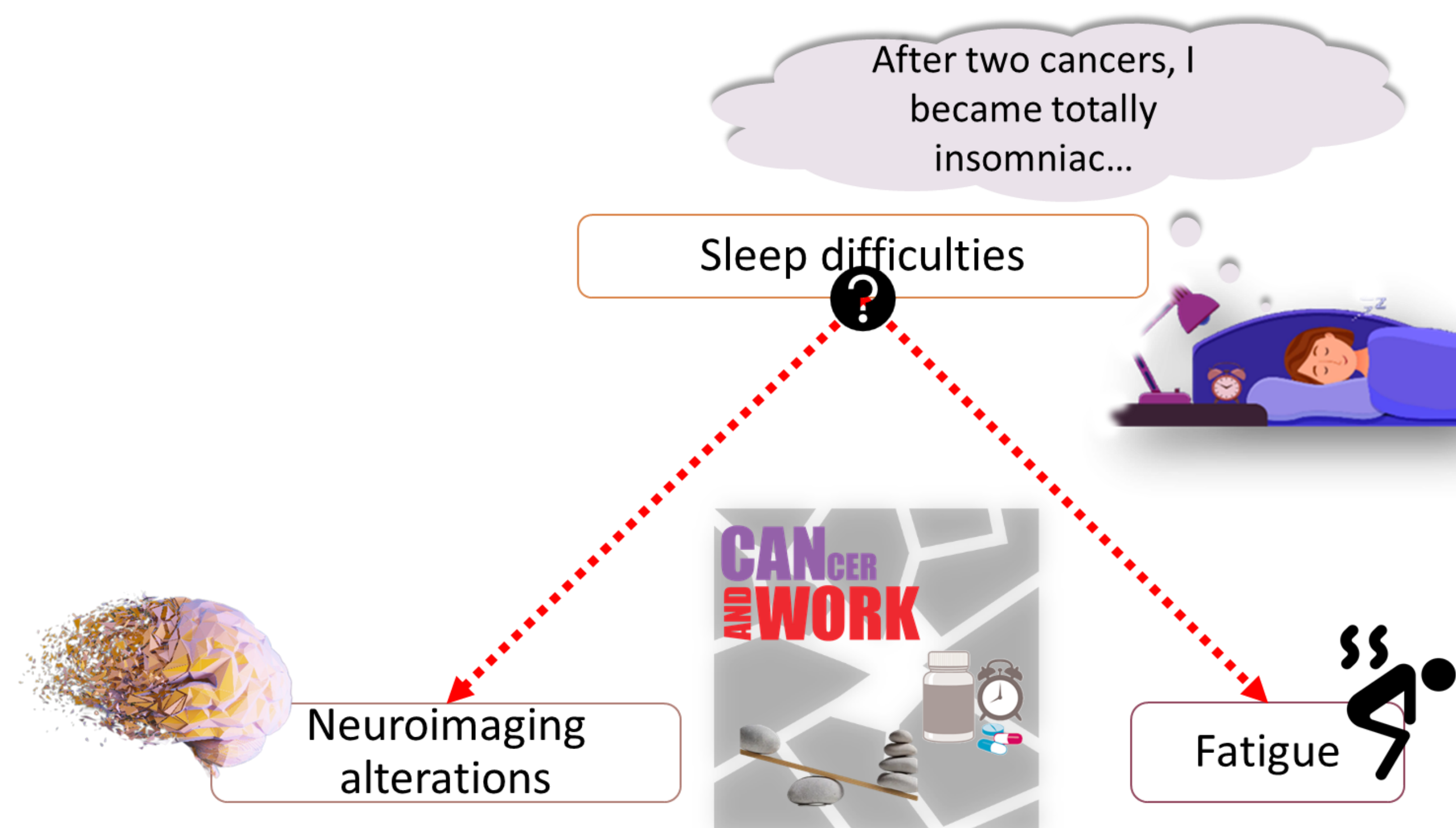


SLEEP AND NEUROIMAGING IN CANCER PATIENTS

(Joy Perrier, Caen University, Neuropsychology and Neuroimaging of Human Memory – NIMH, U1077 Inserm-Unicaen-EPHE-PSL)

INTRODUCTION

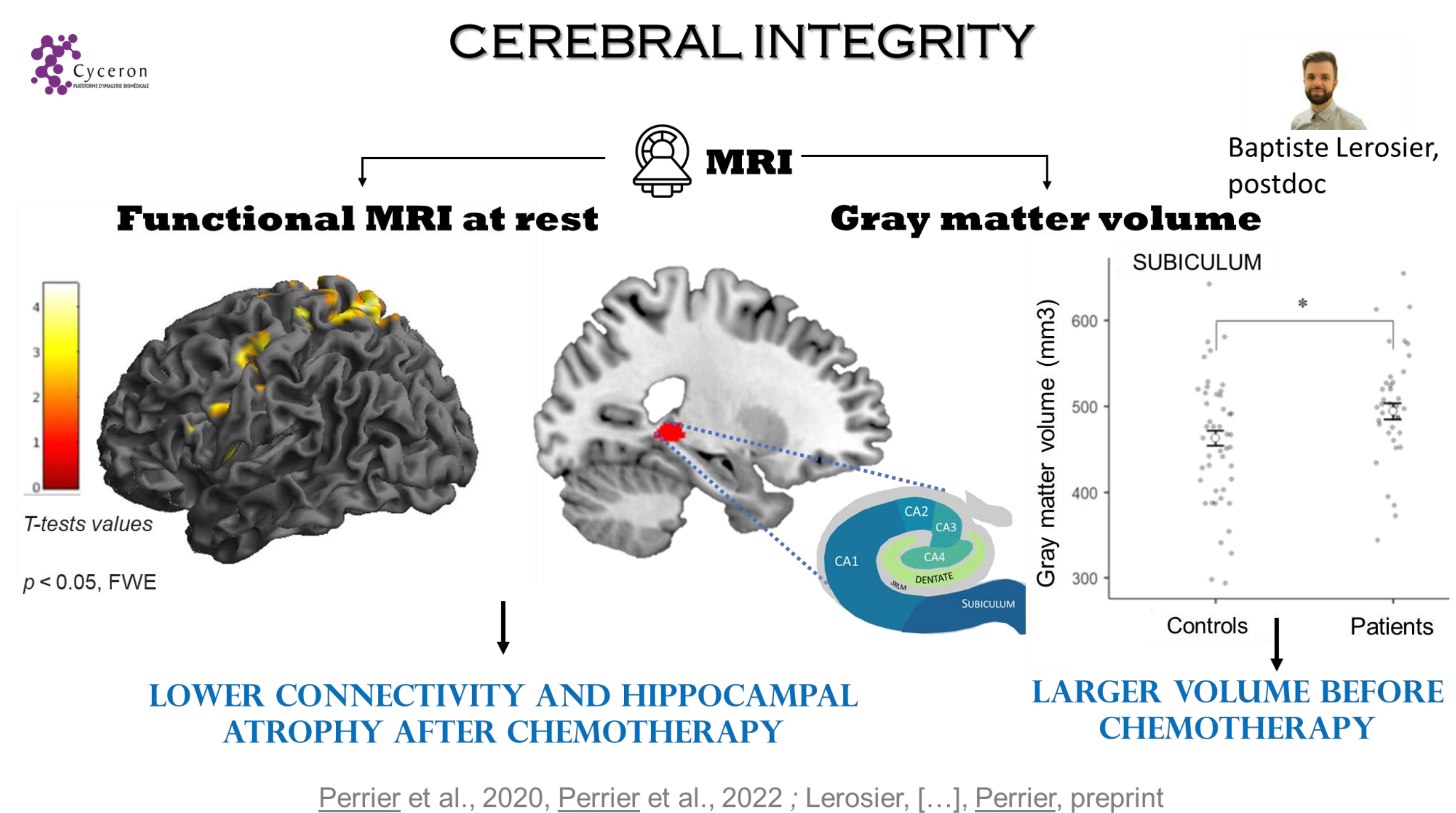
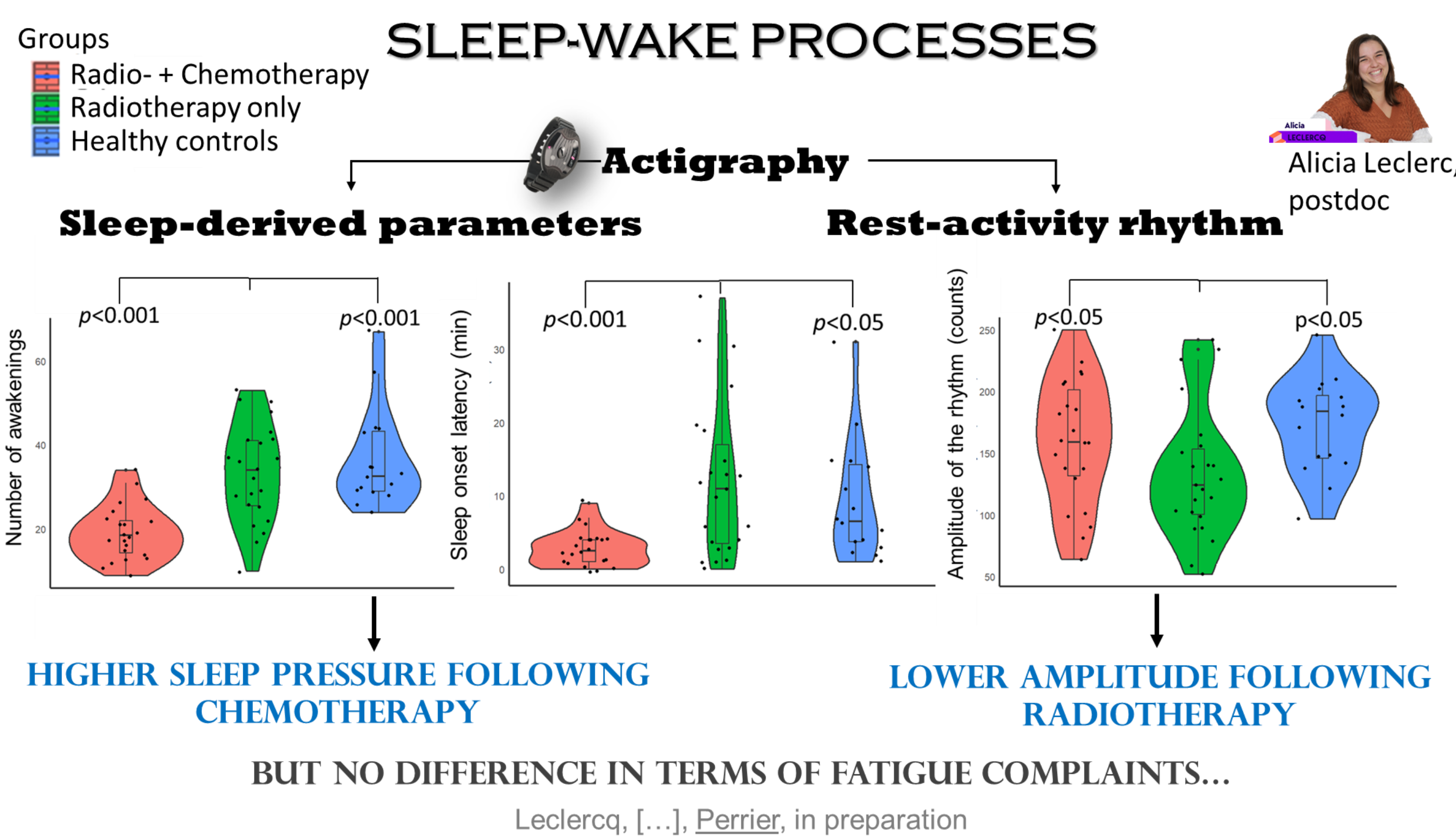
COMPLAINTS OVER CANCER TREATMENTS



AIM


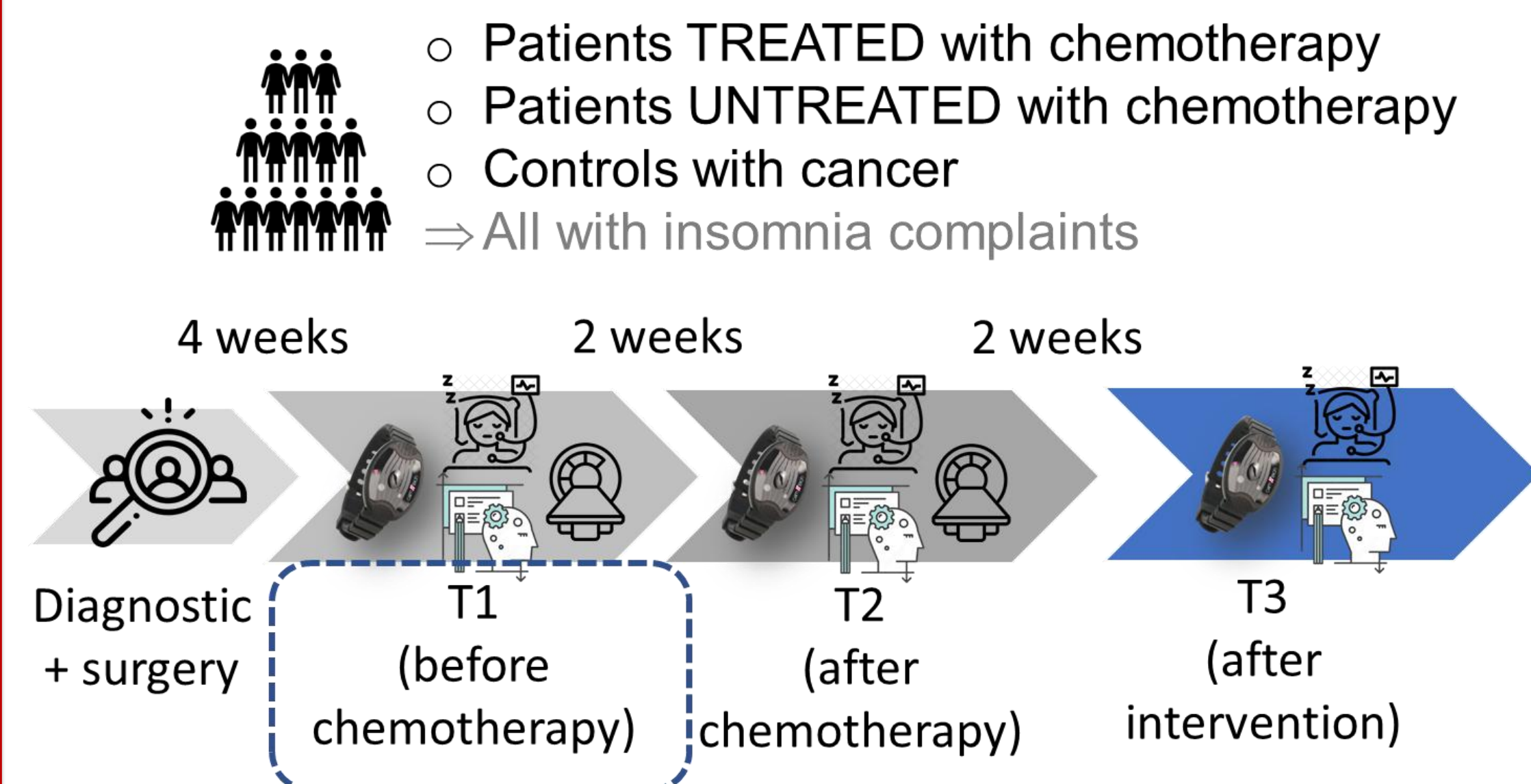
Establish the relationships between sleep-wake processes disturbances and cerebral alterations in breast cancer patients
⇒ Crucial for improving supportive care

RESULTS FROM PREVIOUS PROJECTS



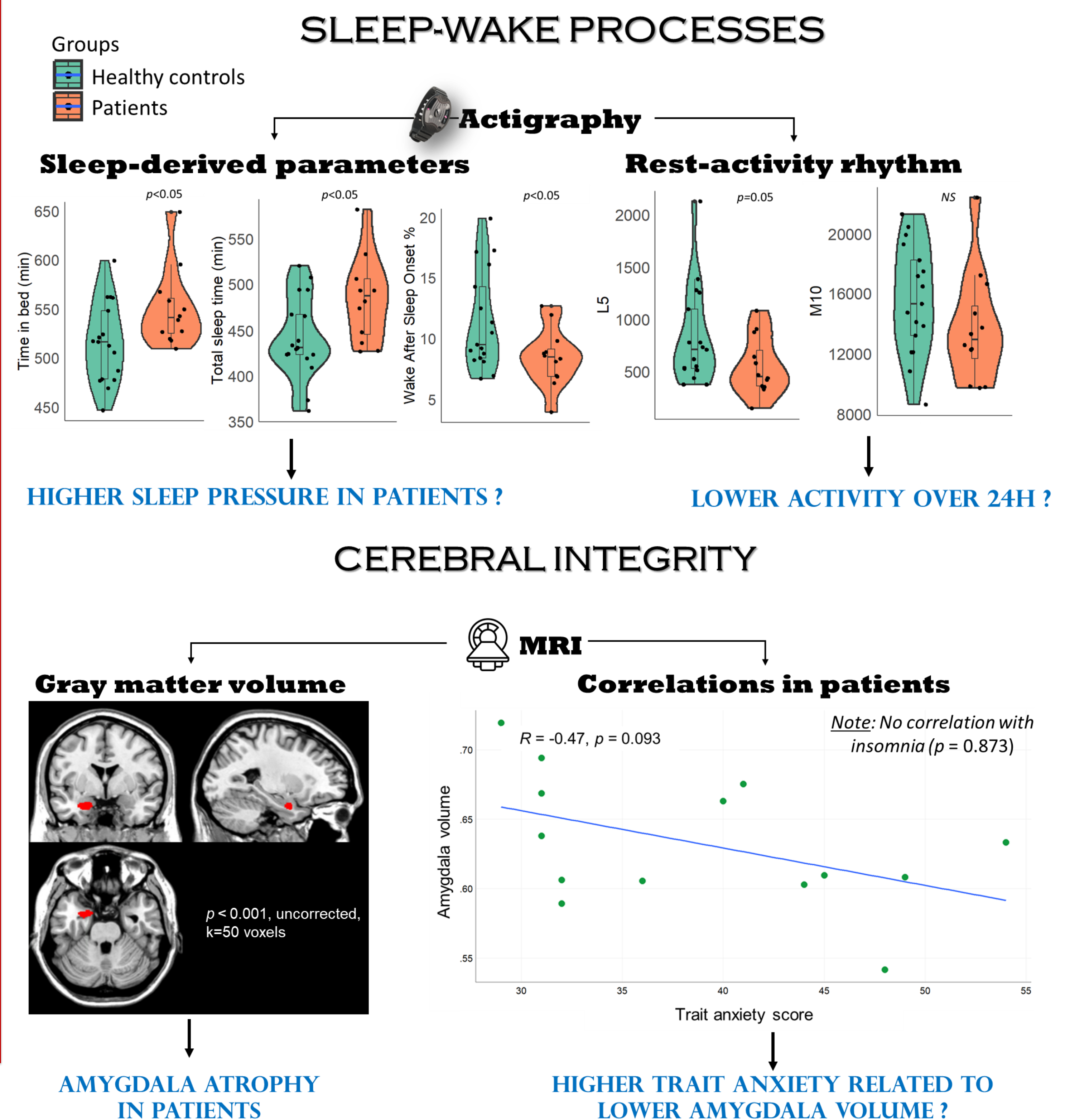
ONGOING PROJECT: preliminary results

ICANSLEEP PROJECT: PARTICIPANTS AND GENERAL DESIGN



PhDs Melvin Galin
and Clara Elia

Questionnaires results	Breast cancer patients (n = 14) Mean ± SD	Healthy controls (n = 16) Mean ± SD	p values
Fact-Cog – cognitive complaints	58.43 ± 11.29	55.94 ± 15.97	0.85
PSQI – sleep complaints	9.21 ± 1.89	9 ± 3.63	0.92
ISI – insomnia complaints	14.36 ± 3.69	14.19 ± 5.87	0.92
MFI – fatigue total score	51.71 ± 16.68	48.75 ± 15.43	0.62
General	24.79 ± 8.56	24.94 ± 9.23	0.96
Mentale	13.50 ± 5.52	14.12 ± 5.80	0.76
Reduction of activities	7.79 ± 2.97	5.44 ± 2.37	0.03
Reduction of motivation	5.64 ± 1.86	4.25 ± 1.57	0.05
KSS - sleepiness			
Day 1 - Beginning	2.86 ± 1.99	2.06 ± 1.65	0.22
Day 1 - End	3.07 ± 2.16	2.56 ± 1.67	0.59
Day 2 - Beginning	2.93 ± 2.13	2.50 ± 1.67	0.58
Day 2 - End	3.21 ± 1.85	2.19 ± 1.64	0.08
STAI-YA – state anxiety	32.36 ± 11.13	25.31 ± 4.81	0.02
STAI-YB – trait anxiety	38.79 ± 8.18	39.19 ± 9.35	0.90
BDI-II - depression	9.57 ± 8.19	9.12 ± 6.77	0.92



DISCUSSION

- ☯ Breast cancer patients have both cerebral and sleep-wake processes alterations **following** adjuvant treatments.
 - ☯ Sleep-wake processes modifications differ depending of adjuvant treatment received (radiotherapy +/- chemotherapy).
 - ☯ Our preliminary results also suggest cerebral and sleep-wake processes alterations **before** adjuvant treatments
- ⇒ Amygdala atrophy associated with anxiety but not with insomnia?
- ⇒ Higher sleepiness instead of fatigue?

References: Duivon et al., 2021, *Neuropsychology review*; Sousa et al., 2020, *Neuroscience and Biobehavioral reviews* ; Weihs et al., 2023 *Journal of Sleep Research*; AFSOS referential, 2024