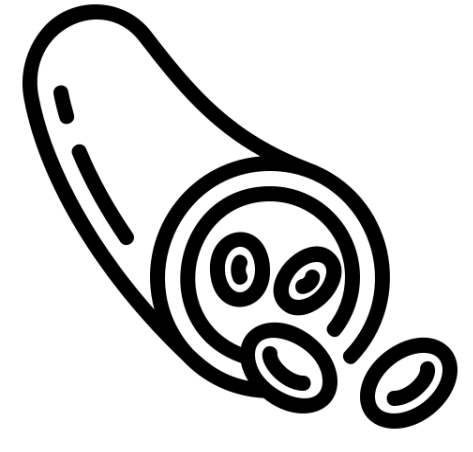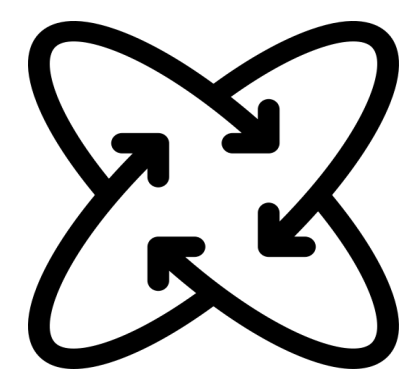# More preceding electroconvulsive therapy (ECT)-induced seizures predict slower postictal EEG recovery
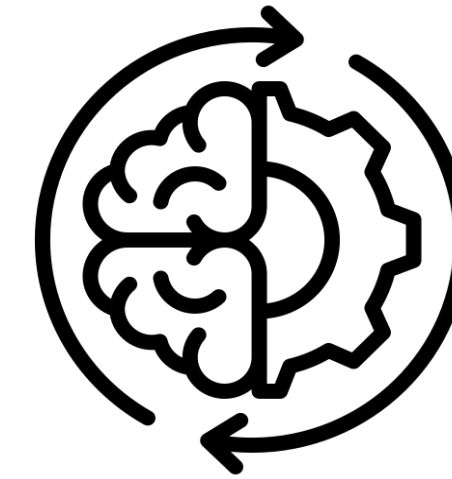
P2.021

Introduction

Postictal state may result from vasoconstriction-mediated hypoperfusion/hypoxia

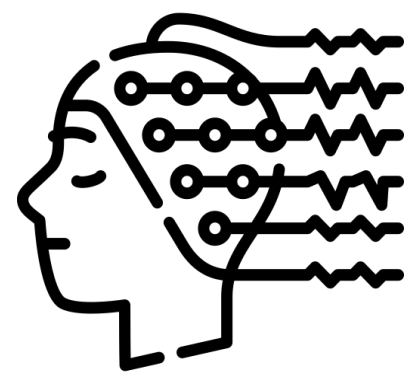Complex relationship between seizure duration and postictal state
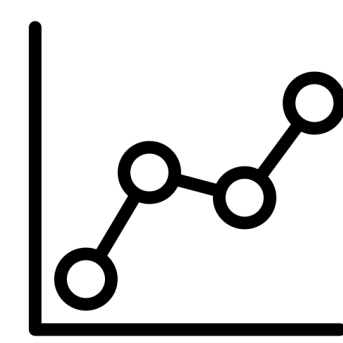
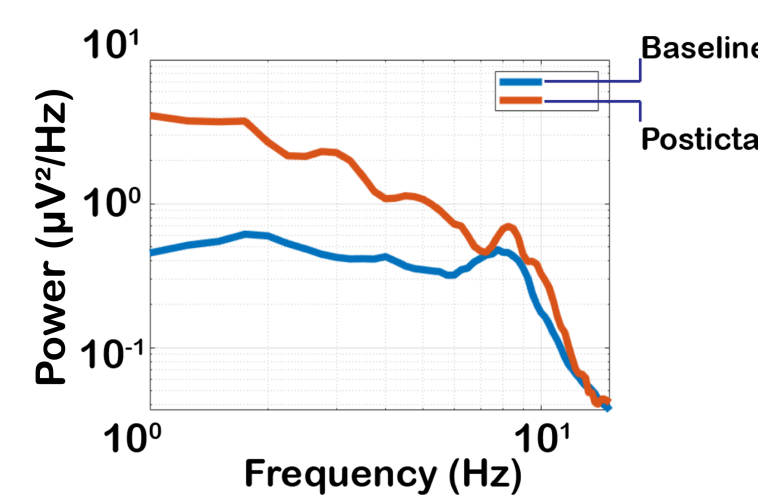More cognitive problems follow longer seizures

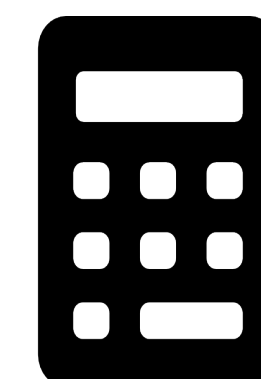## Methods

30 ECT Patients with depression

290 postictal EEGs

Multiple measures

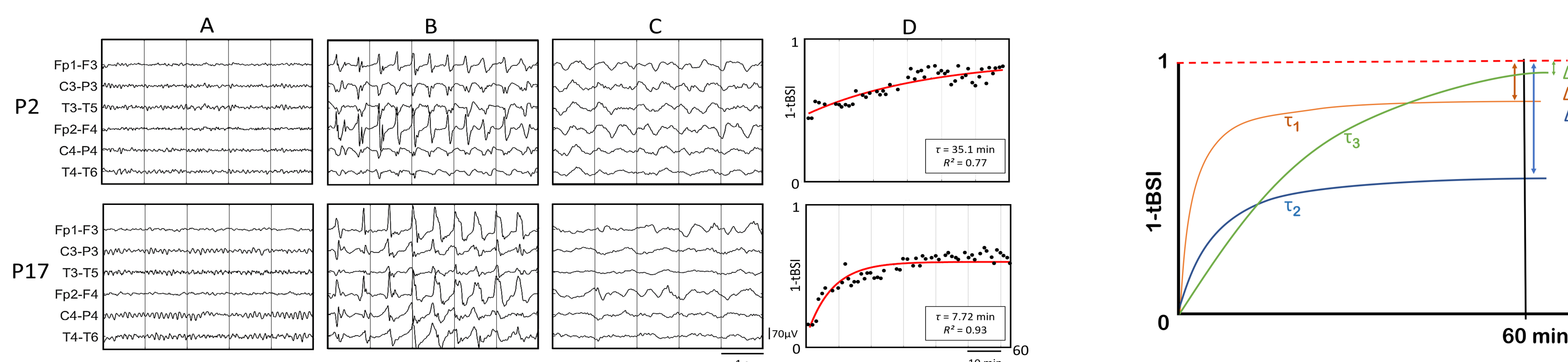Temporal brain symmetry index

Bayesian mixed model

Results

Figure 1. Three 5 sec EEG segments of two patients (P2 and P17). A eyes-closed baseline, B generalized seizure, and C postictal slow waves (t = 25 minutes). Patient P2 shows a slower postictal EEG recovery compared to patient P17 (D). A schematic representation of different scenarios of speed (τ) and extent (ΔBSI) of postictal EEG recovery are presented on the right.

Table 1. Patient characteristics [Mean and range or % and n]

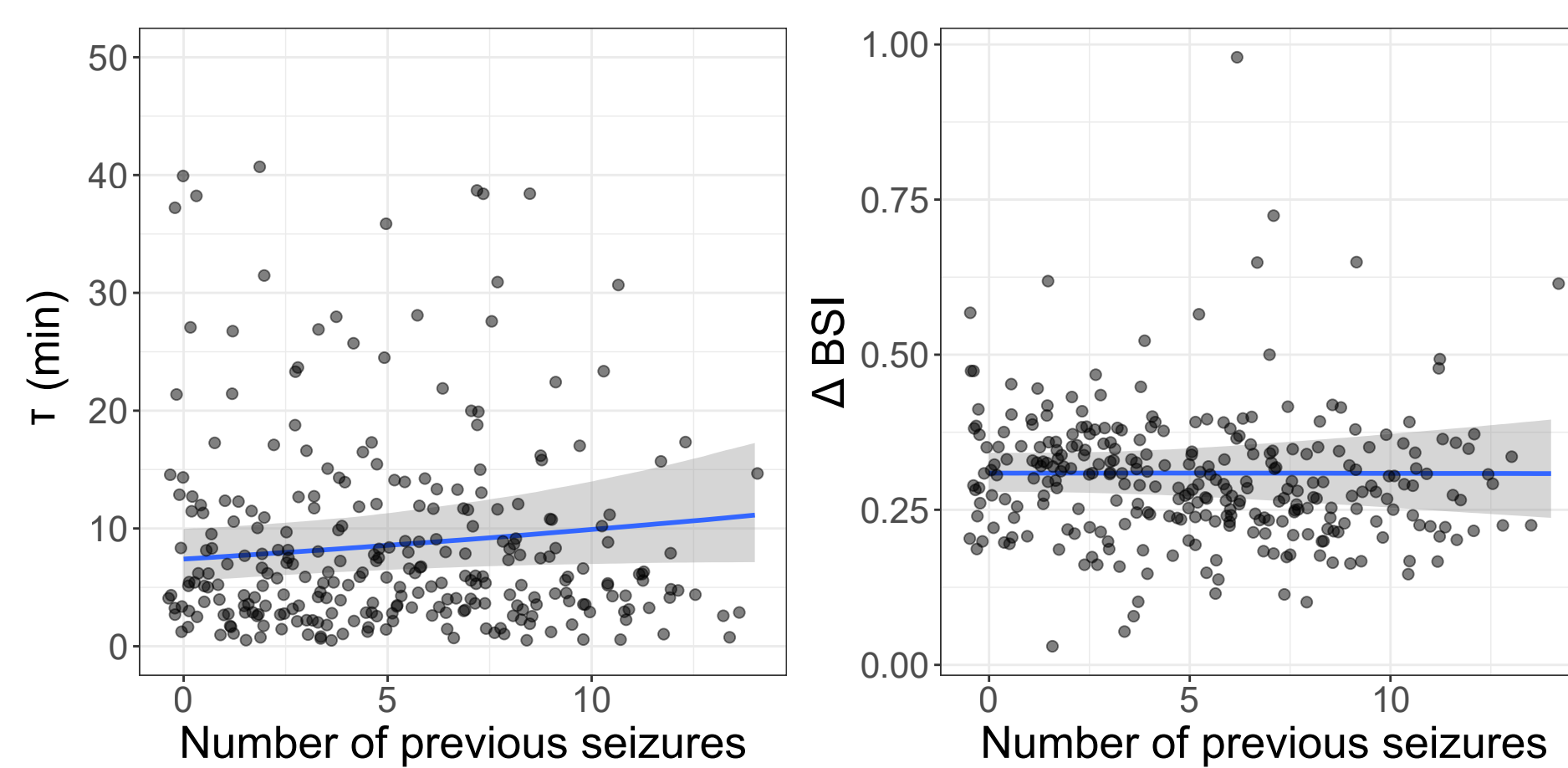|	
Female	53% [16]
Age	50 yrs [24–82]
BL electrode placement	70% [21; 7 RUL,2 LUL]
Seizure duration	52 sec [6.4–266]
# ECT-sessions	12 [7–100]
Postictal medication	45% [10]
Speed of postictal EEG recovery [τ]	6.13 min [0.5–138]
Extent of postictal EEG recovery [ΔBSI]	0.29 [0.03–0.98]

Figure 2. More previous seizures were related to slower EEG recovery (τ) but not extent of recovery (ΔBSI) (1.029 [1.000, 1.064] CI95 and 1.000 [0.976, 1.027], respectively). When excluding patients receiving benzodiazepines and UL-ECT, seizure duration was related to both τ and ΔBSI.

The article SCAN ME

Julia C. M. Pottkämper[1,2,3]

J. P. A. J. Verdijk[1,2], S. Stuiver[1,2], E. Aalbregt[3], M. Schmettow[1], J. Hofmeijer[1,2], M. J. A. M. van Putten[1], J. A. van Waarde[2]

1   University of Twente, The Netherlands
2   Rijnstate Hospital, The Netherlands
3   Amsterdam UMC location Vumc, The Netherlands

Conclusion

More preceding ECT-induced seizures predict slower postictal EEG recovery.

j.c.m.pottkaemper@utwente.nl

UNIVERSITY OF TWENTE. | TECHMED CENTRE

Rijnstate

EpilepsieNL