

QEEG Clinical Report

EEGLens



The QEEG report is provided by NPCindex Company, operating under the QEEGhome brand.

Personal Data:

Name: Ghader Badali

Gender: Male

Age: 1969-08-27 - 56.2

Handedness: Right

Clinical Data:

Initial diagnosis: Depression

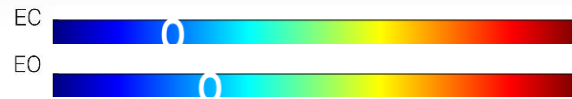
Medication: -

Date of Recording: 2025-10-09

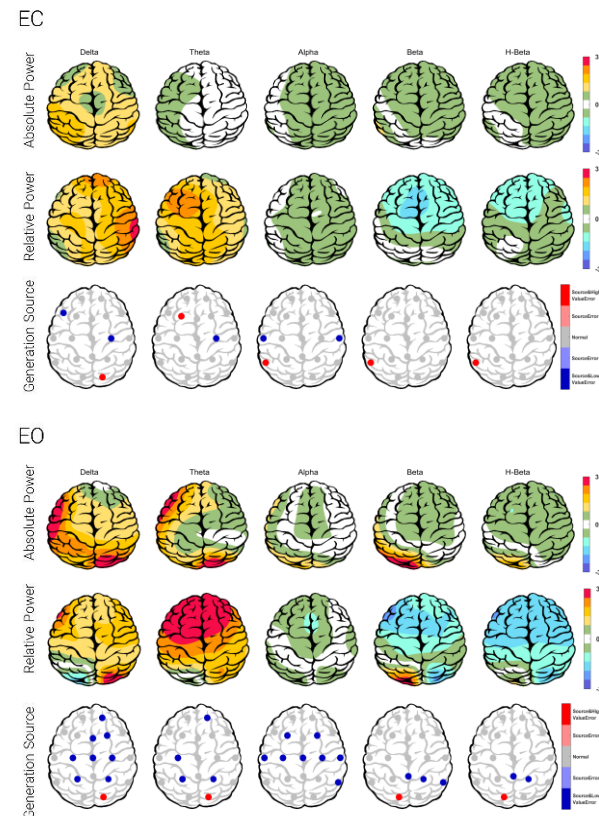
Source of Referral: Ms Aliakbari

This case belongs to **Ms Aliakbari**

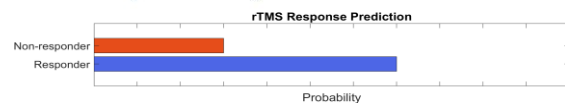
EEG Quality



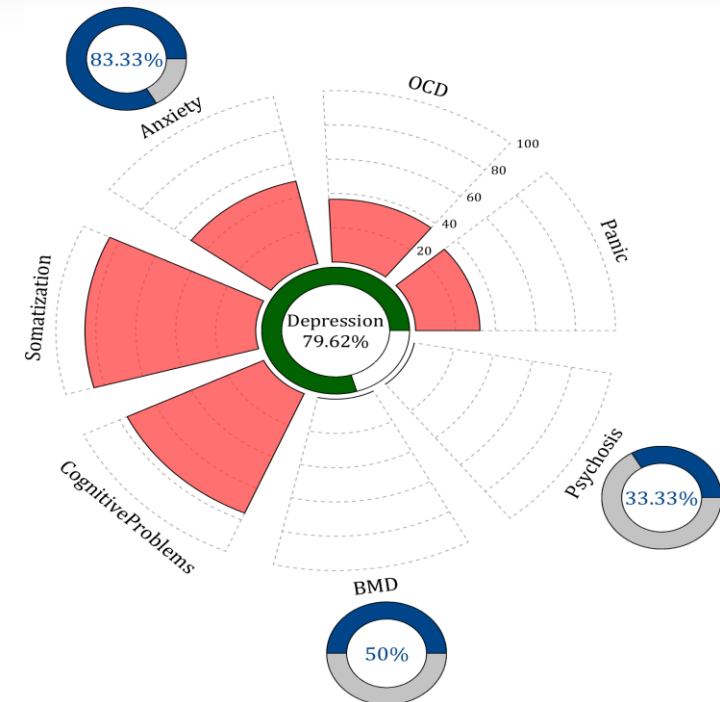
Z-score Information



TMS Responsibility



Pathological Assessment



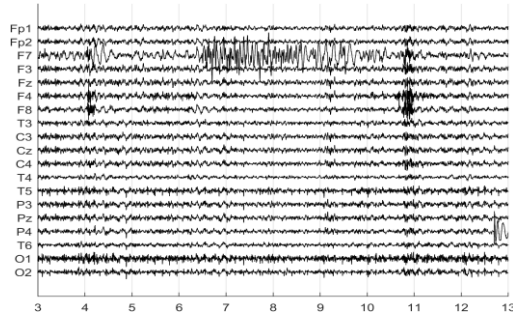
EEG Neuromarker Values

Neuromarker	Region	Value	Assessment
APF - EO	Frontal	10.17	Normal
AFP - EC	Frontal	10.25	Normal
APF - EO	Occipital	10.38	Normal
AFP - EC	Occipital	10.25	Normal
Arousal Level - EO	-	-	Normal
Arousal Level - EC	-	-	Normal

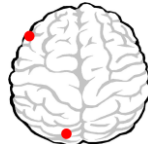
Denoising Information

Eye Close

Raw EEG



Rejected Channel



Total Recording Time Remaining:

101.96 sec

Number of Eye and Muscle Elements

Eye: 0

Muscle: 1

Low Artifact Percentage



High Artifact Percentage

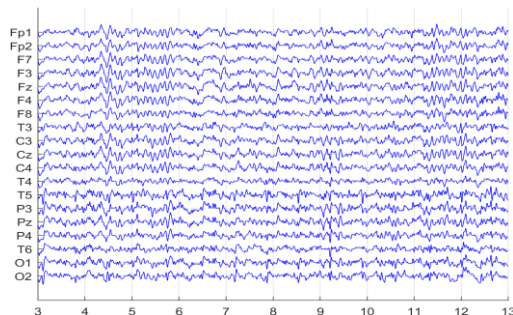


Total Artifact Percentage



EEG Quality: perfect

Denoised EEG

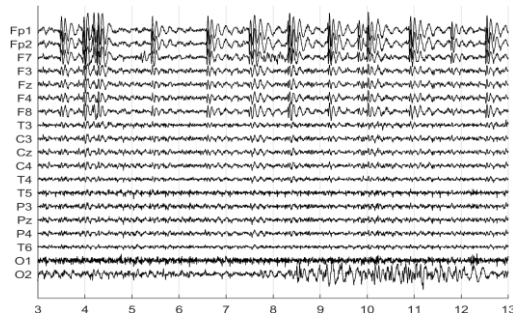


Flat Channel



Eye Open

Raw EEG



Rejected Channel



Total Recording Time Remaining:

263.15 sec

Number of Eye and Muscle Elements

Eye: 2

Muscle: 0

Low Artifact Percentage



High Artifact Percentage

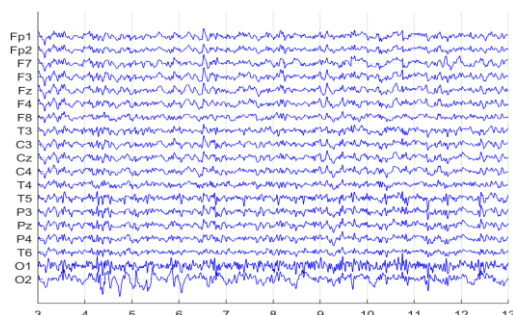


Total Artifact Percentage



EEG Quality: perfect

Denoised EEG

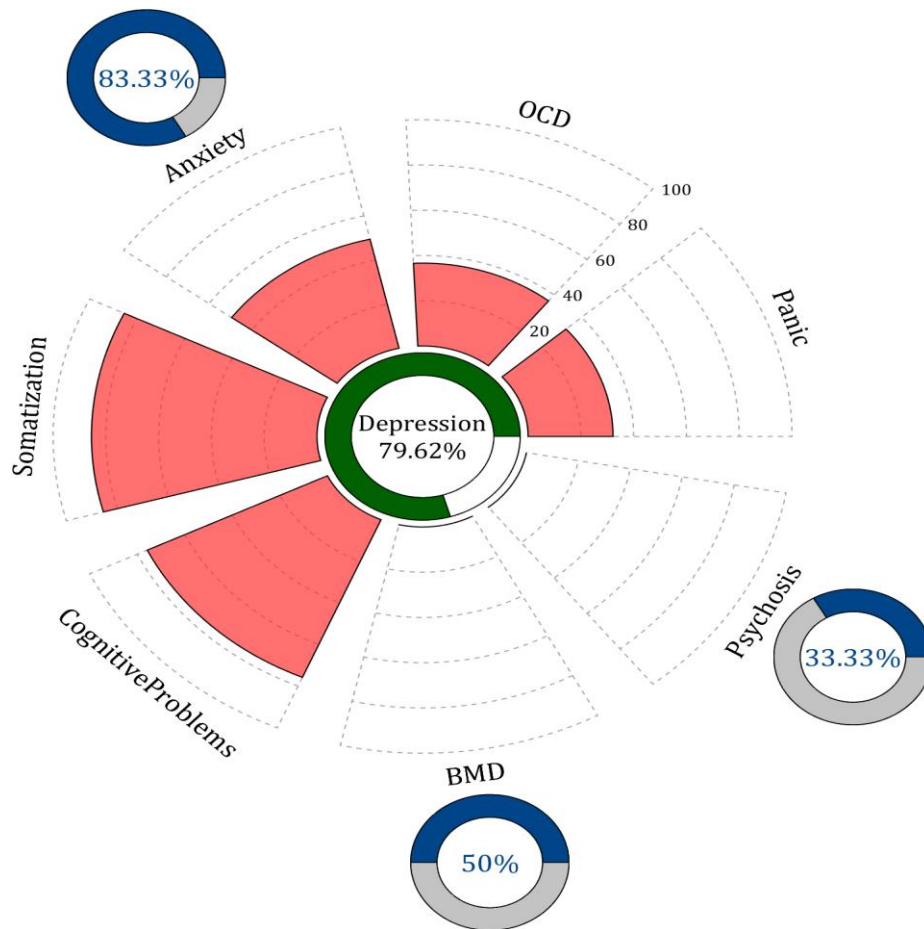


Flat Channel



Pathological Assessment

Main Diagnosis: Depression



Description

According to the guidelines, the initial diagnosis of depression could have comorbidities such as **alcohol abuse, panic attacks, OCD, and anxiety**. It also differentially diagnoses with **anxiety, bipolar disorder, alcohol abuse, psychosis, and somatoform**.

In the above graph, the **red area** shows the percentage of each comorbidity from your patient's EEG markers. Observe that each comorbidity marker is not unique and can be shared with other comorbidities.

Side circles in the above graph represent the differential diagnosis between depression and its misdiagnosis conditions based on your patient's EEG markers and trained artificial intelligence. The differential diagnosis probability is represented by **the bold blue bars** in the circles, and the probability of depression is represented by the **gray bars**.

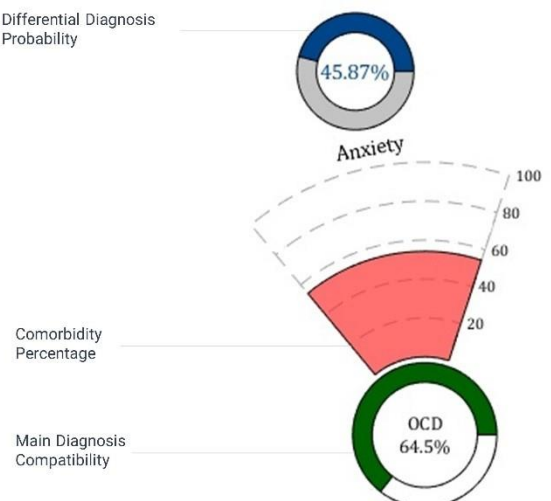
Note: In case your patient has drug abuse, obtain the substance abuse pathologic page of QEEGhome by registering the diagnosis under the initial diagnoses section of the website.

References:

Sadock, B. J., Sadock, V. A., & Ruiz, P. (Eds.). (2025). Kaplan and Sadock's comprehensive textbook of psychiatry (11th ed., Vols. 1–2). Wolters Kluwer
 Sadock, B. J., Sadock, V. A., & Ruiz, P. (2022). Kaplan and Sadock's synopsis of

User Manual

Differential Diagnosis Probability



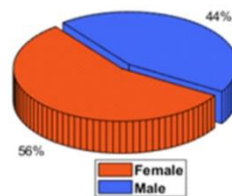
rTMS Response Prediction

Network Performance

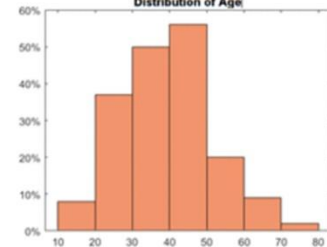
Accuracy: 92.10%
Sensitivity: 89.13%
Specificity: 97.47%

Participants Information

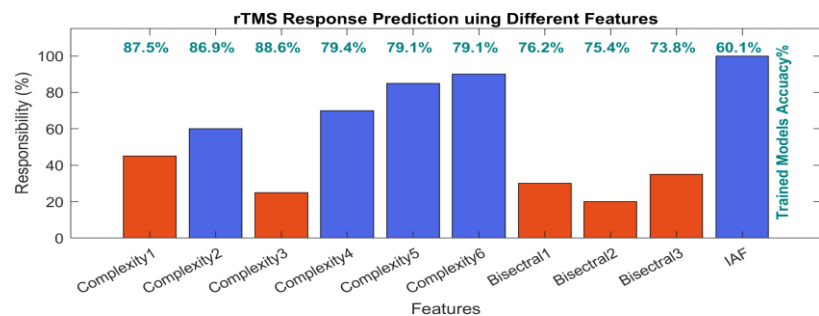
Distribution of Gender



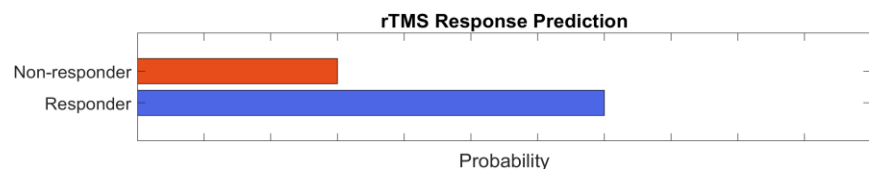
Distribution of Age



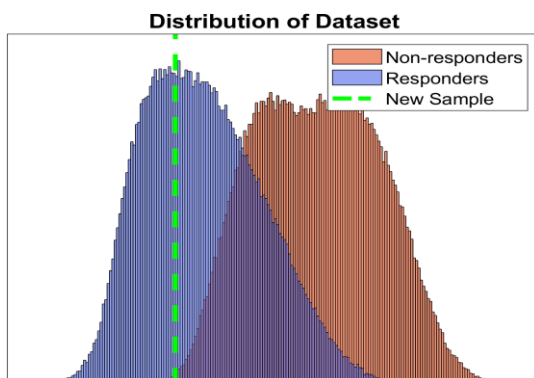
Features Information



Responsibility



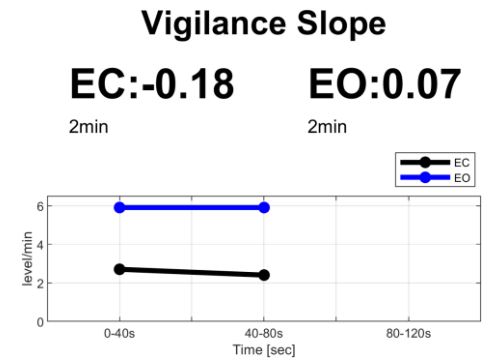
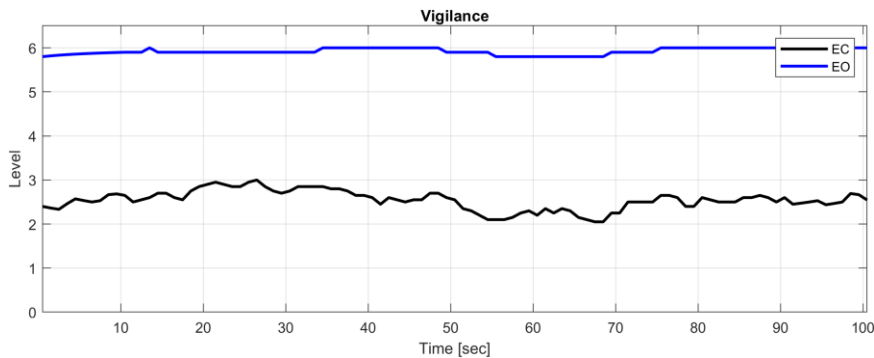
Data Distribution



About Predicting rTMS Response

This index was obtained based on machine learning approaches and by examining the QEEG biomarkers of more than 470 cases treated with rTMS. The cases were diagnosed with depression (with and without comorbidity) and all were medication free. By examining more than 40 biomarkers capable of predicting response to rTMS treatment in previous studies and with data analysis, finally 10 biomarkers including bispectral and nonlinear features entered the machine learning process. The final chart can distinguish between RTMS responsive and resistant cases with 92.1% accuracy. This difference rate is much higher than the average response to treatment of 44%, in the selection of patients with clinical criteria, and is an important finding in the direction of personalized treatment for rTMS.

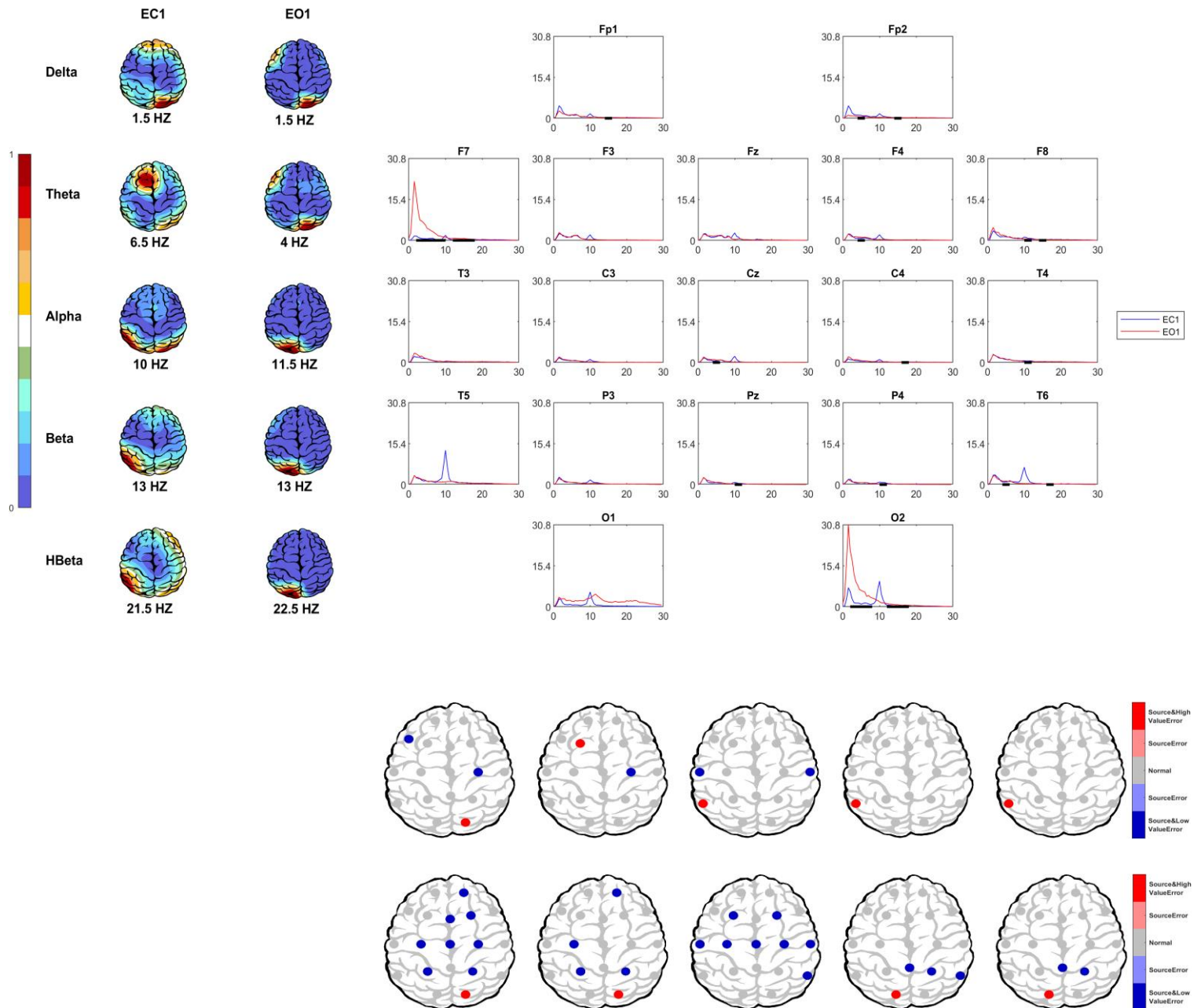
Vigilance



EEG Neuromarker Values

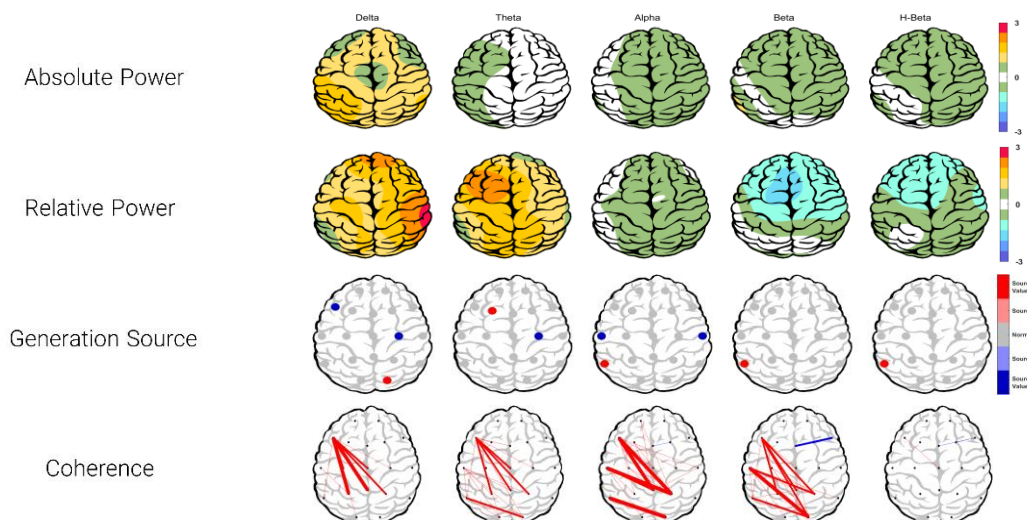
Neuromarker	Region	Value	Assessment
APF - EO	Frontal	10.17	Normal
AFP - EC	Frontal	10.25	Normal
APF - EO	Occipital	10.38	Normal
AFP - EC	Occipital	10.25	Normal
Alpha Asymmetry - EO	Frontal	-0.05	Anhedonia
Alpha Asymmetry - EC	Frontal	-0.03	Anhedonia
Alpha Asymmetry - EO	Occipital	00.24	Anxiety
Alpha Asymmetry - EC	Occipital	-0.27	Anhedonia
Beta Asymmetry - EO	Frontal	-0.08	Anxiety
Beta Asymmetry - EC	Frontal	-0.08	Anxiety
Alpha Blocking	-	-	Not Observed
Arousal Level - EO	-	-	Normal
Arousal Level - EC	-	-	Normal
Vigilance Level - EO	-	06.00	Normal
Vigilance Level - EC	-	02.00	Low
Vigilance Mean - EO	-	05.92	Normal
Vigilance Mean - EC	-	02.55	Normal
Vigilance Regulation - EO	-	00.07	Normal
Vigilance Regulation - EC	-	-0.18	Normal
Vigilance 0 Stage (%) - EO	-	96.04	High
Vigilance 0 Stage (%) - EC	-	00.00	Normal
Vigilance A1 Stage (%) - EO	-	00.00	-
Vigilance A1 Stage (%) - EC	-	03.96	-

EEG Spectra

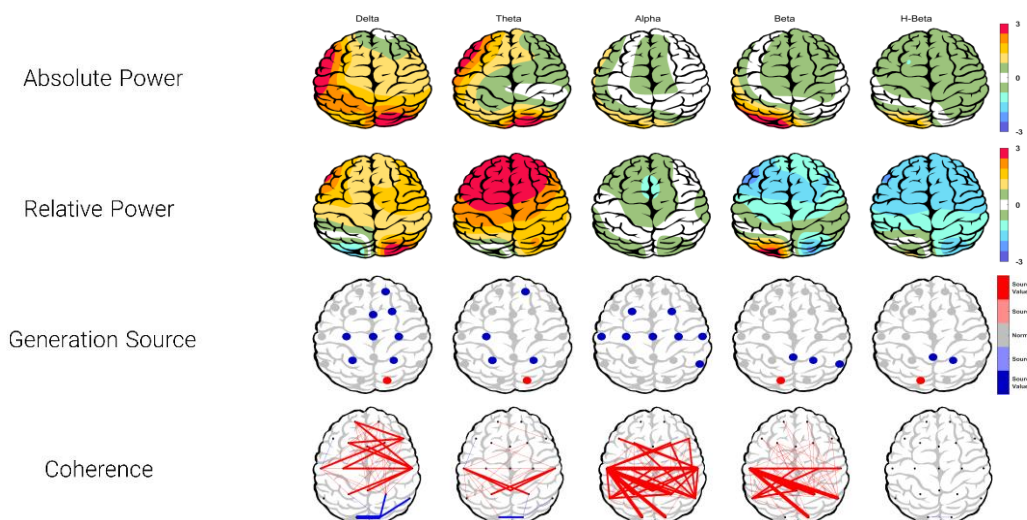


Z Score Summary Information

■ Eye Close

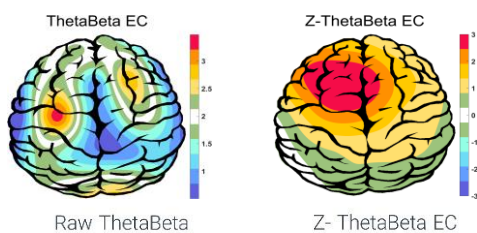


■ Eye Open

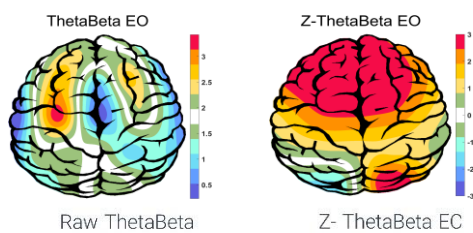


Theta/Beta Ratio

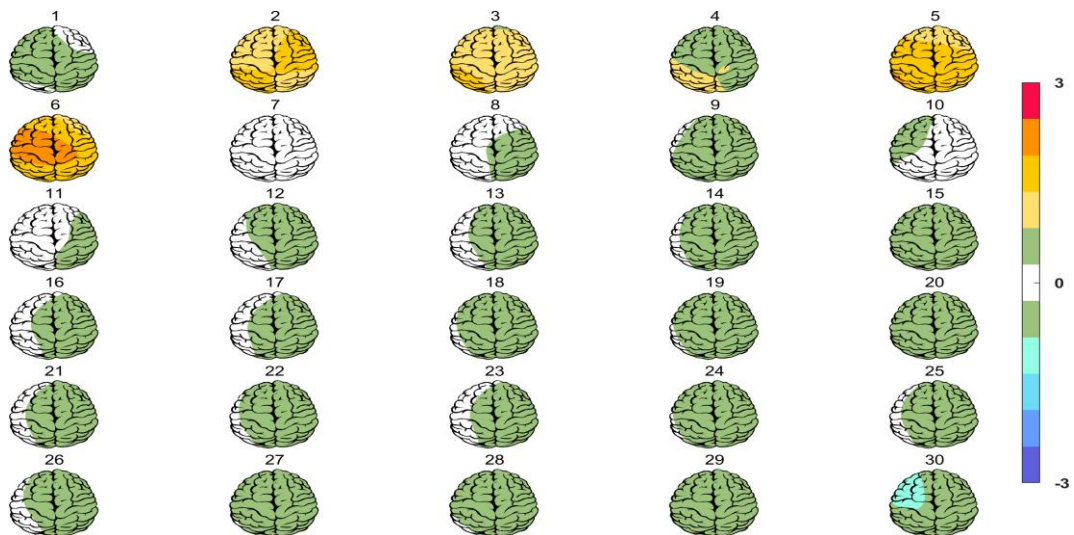
■ Eye Close



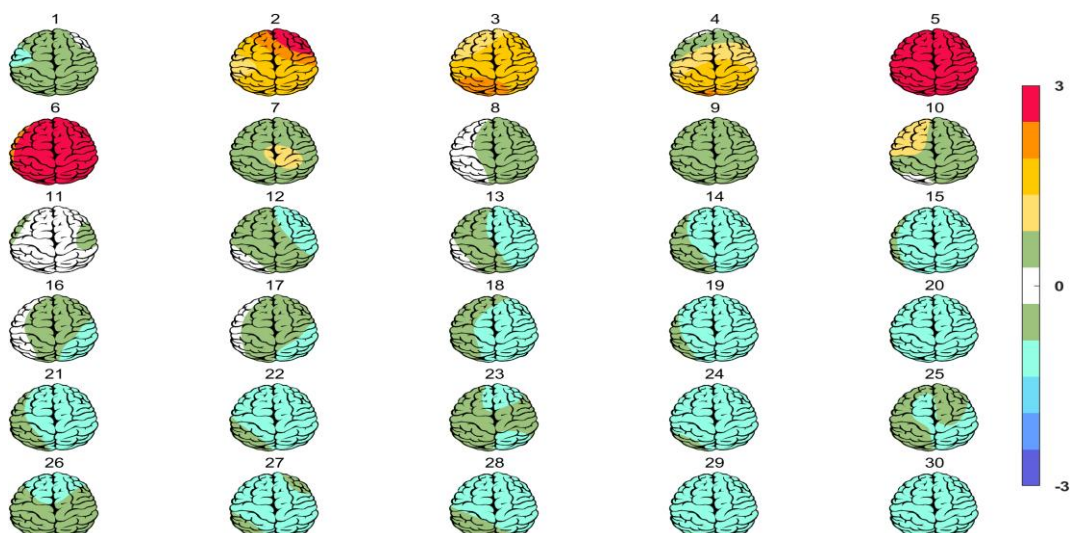
■ Eye Open



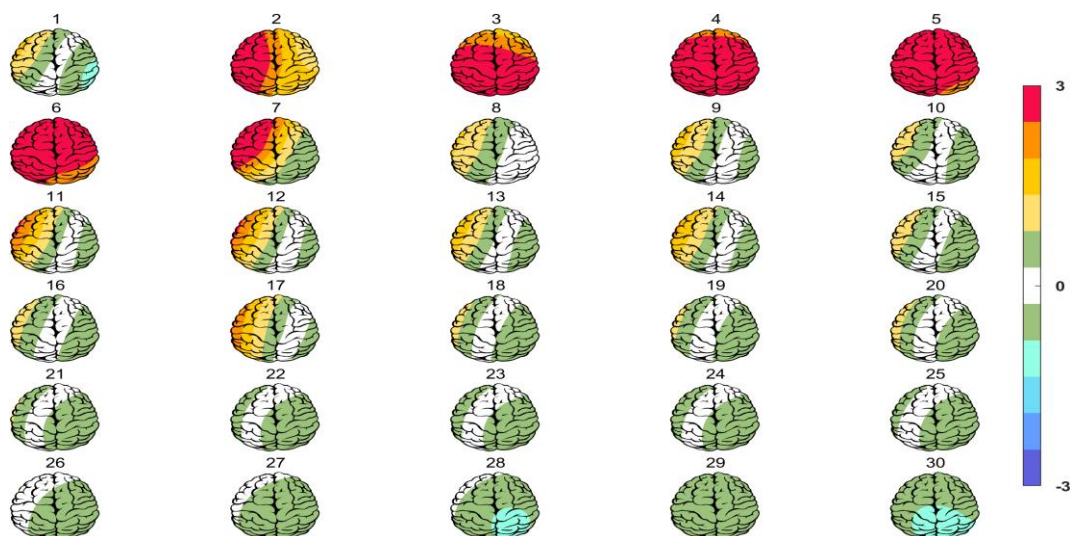
Absolute Power-Eye Close



Relative Power-Eye Close



Absolute Power-Eye Open



Relative Power-Eye Open

