

# QEEG Clinical Report

EEGLens

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



## Personal Data:

Name:  
Gender:  
Age:  
Handedness:

## Clinical Data:

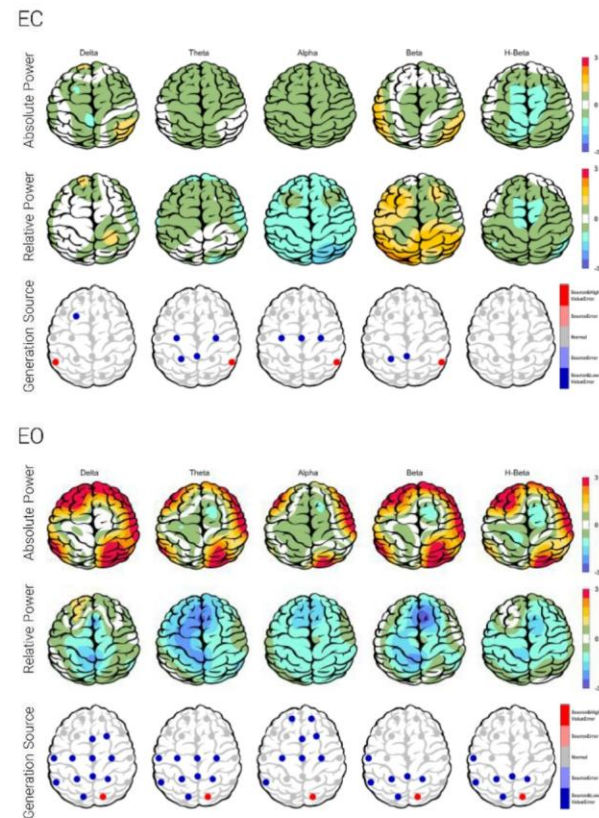
Initial diagnosis:  
Medication:  
Date of Recording:  
Source of Referral:

This case belongs to

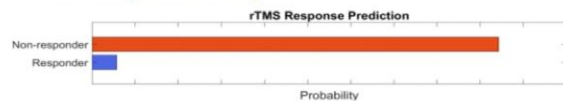
## EEG Quality



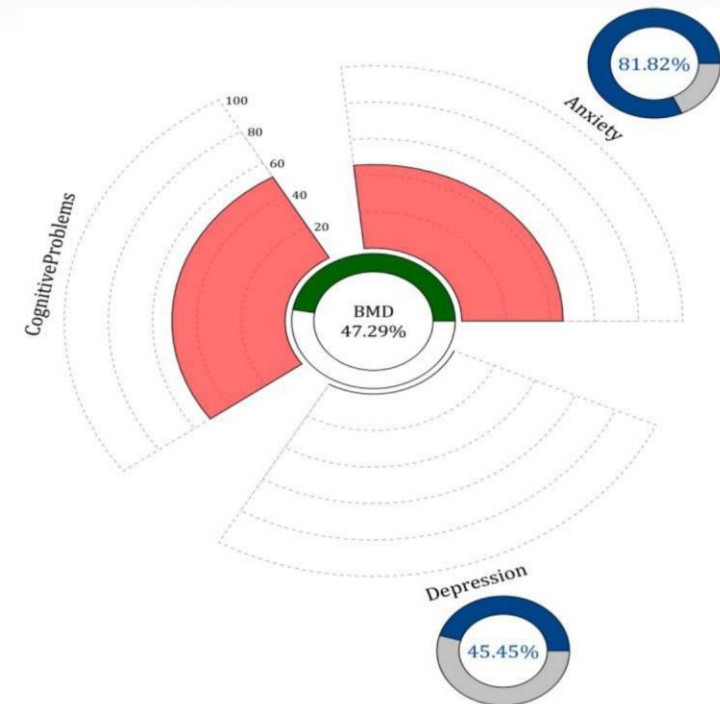
## Z-score Information



## TMS Responsibility



## Pathological Assessment



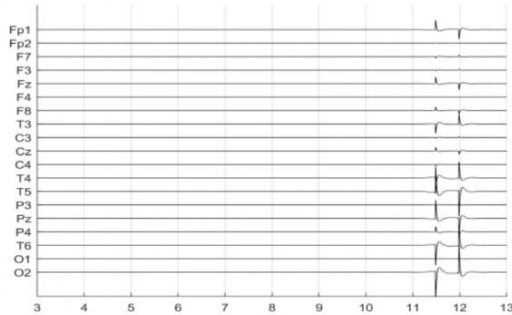
## EEG Neuromarker Values

Neuromarker	Region	Value	Assessment
APF - EO	Frontal	10.67	High
AFP - EC	Frontal	12.92	High
APF - EO	Occipital	12.00	High
AFP - EC	Occipital	13.88	High
Arousal Level - EO	-	-	Normal
Arousal Level - EC	-	-	High

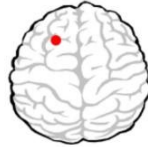
## Denoising Information

### Eye Close

Raw EEG



Rejected Channel



**Total Recording Time Remaining:**

296.94 sec

**Number of Eye and Muscle Elements**

Eye: 0

Muscle: 0

Low Artifact Percentage



High Artifact Percentage

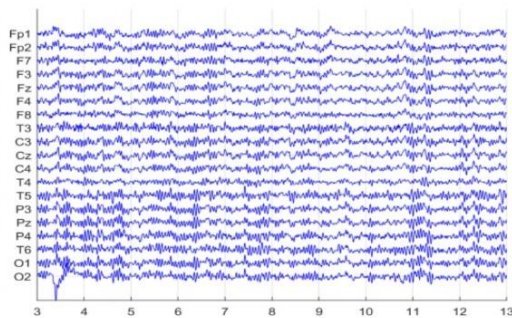


Total Artifact Percentage



**EEG Quality:** perfect

Denoised EEG

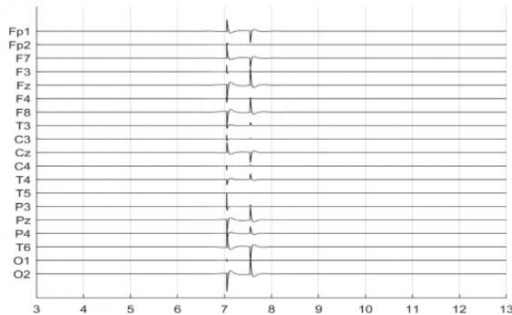


Flat Channel



### Eye Open

Raw EEG



Rejected Channel



**Total Recording Time Remaining:**

438.16 sec

**Number of Eye and Muscle Elements**

Eye: 1

Muscle: 0

Low Artifact Percentage



High Artifact Percentage

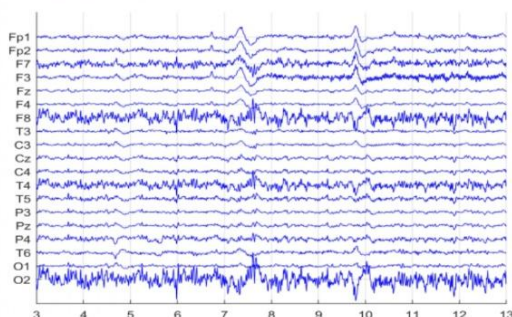


Total Artifact Percentage



**EEG Quality:** good

Denoised EEG



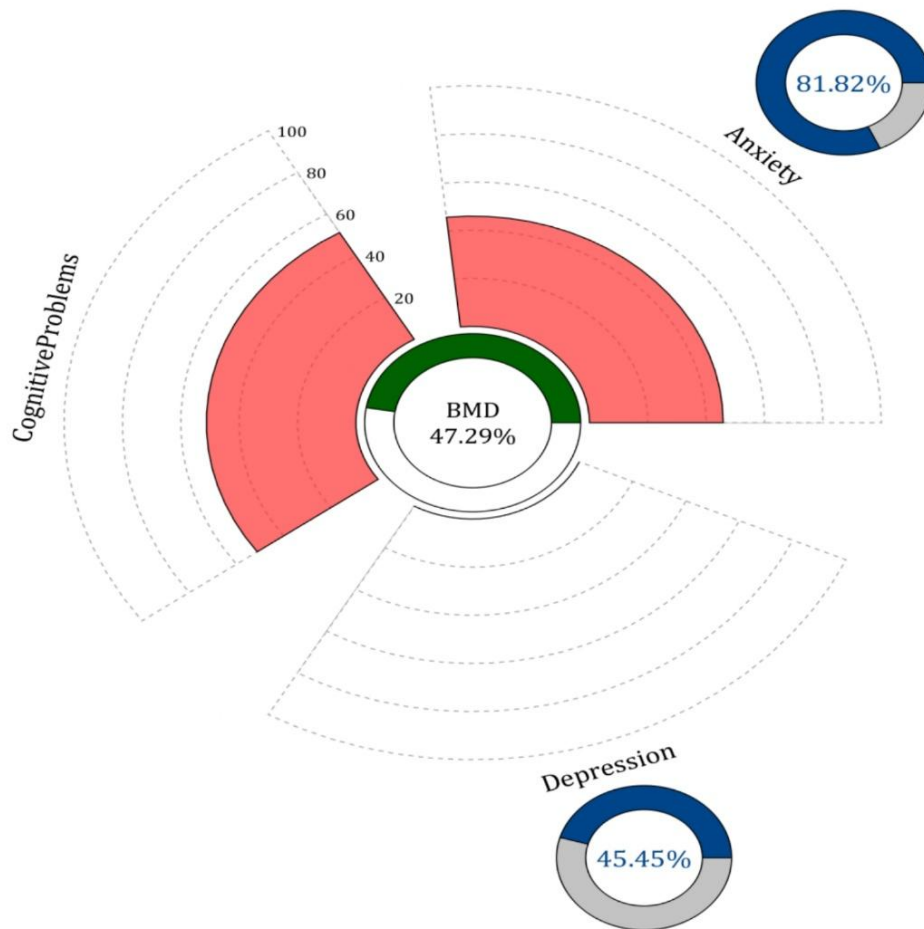
Flat Channel





## Pathological Assessment

Main Diagnosis: Bipolar Mood Disorder



### Description

According to the guidelines, the initial diagnosis of BMD could have comorbidities such as **alcohol abuse and anxiety**. It also differentially diagnoses with **depression and anxiety disorder**.

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**.

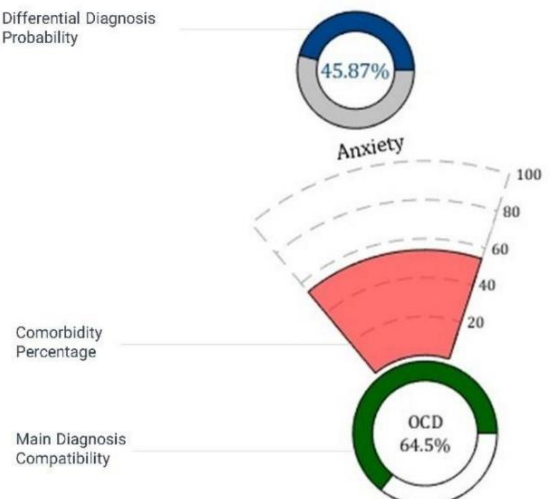
**Note:** In case your patient has drug abuse, obtain the substance abuse pathologic page of QEEGhome by registering the diagnosis under the initial diagnoses section of the website.

#### References:

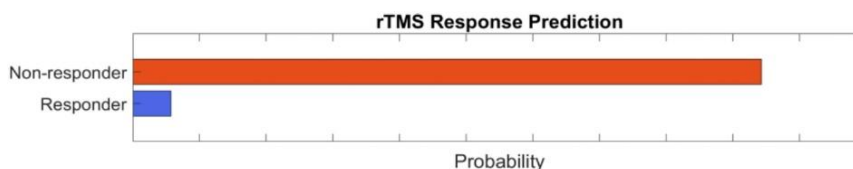
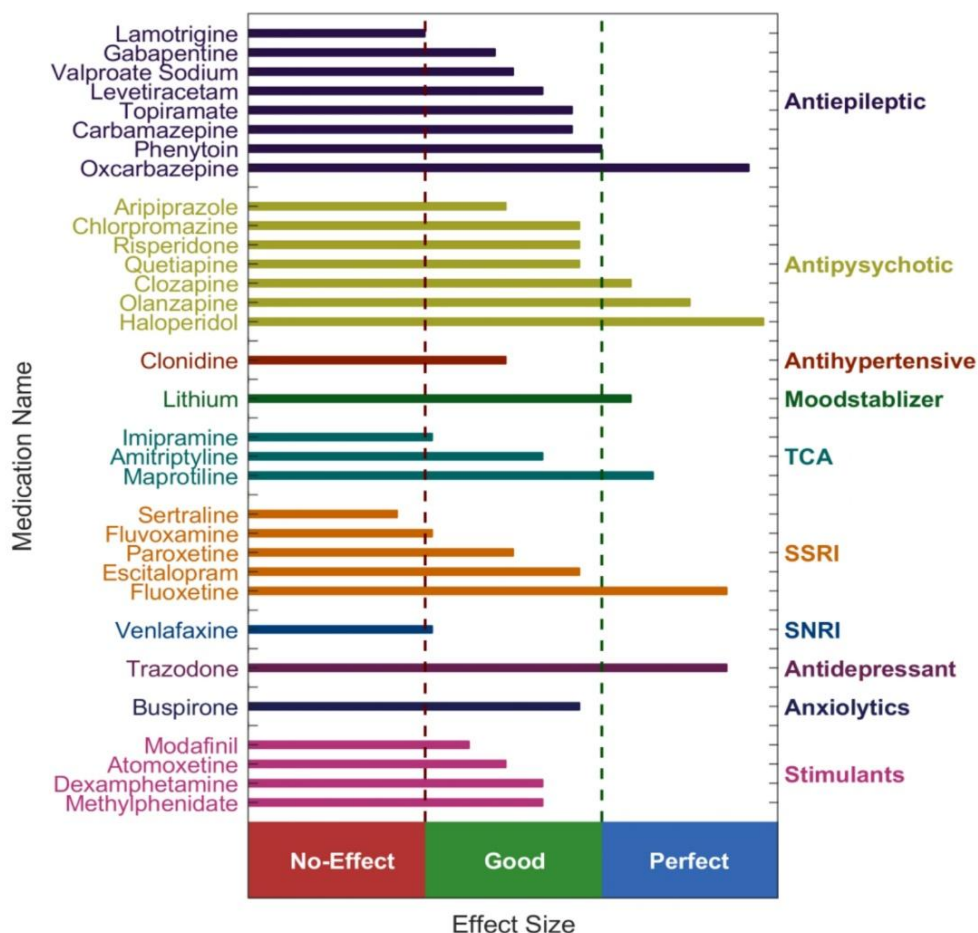
Sadock, B. J., Sadock, V. A., & Ruiz, P. (Eds.). (2025). Kaplan and Sadock's comprehensive textbook of psychiatry (11th ed., Vols. 1-2). Wolters Kluwer  
 Sadock, B. J., Sadock, V. A., & Ruiz, P. (2022). Kaplan and Sadock's synopsis of psychiatry: Behavioral sciences/clinical psychiatry (12th ed.). Wolters Kluwer

### User Manual

Differential Diagnosis Probability



## QEEG Based Predicting Medication Response



### Explanation

These two tables can be considered the most important finding that can be extracted from QEEG. To prepare this list, the NPCIndex Article Review Team has studied, categorized, and extracted algorithms from many authoritative published articles on predict medication response and Pharmacoe EEG studies. These articles are published between 1970 and 2021. The findings extracted from this set include 85 different factors in the raw band domains, spectrum, power, coherence, and loreta that have not been segregated to avoid complexity, and their results are shown in these diagrams. One can review details in NPCIndex.com .

### Medication Recommendation

These two charts, calculate response probability to various medications, according only to QEEG indicators. Blue charts favor drug response and red charts favor drug resistance. The longer the bar, the more evidence there is in the articles. Only drugs listed in the articles are listed. These tables present the indicators reviewed in the QEEG studies and are not a substitute for physician selection.

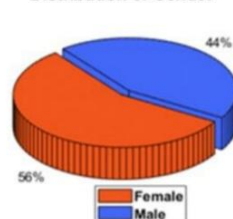
## rTMS Response Prediction

### Network Performance

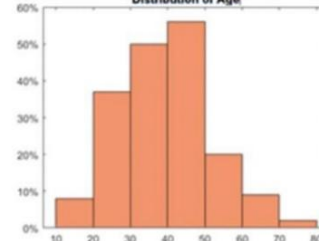
Accuracy: 92.10%  
Sensitivity: 89.13%  
Specificity: 97.47%

### Participants Information

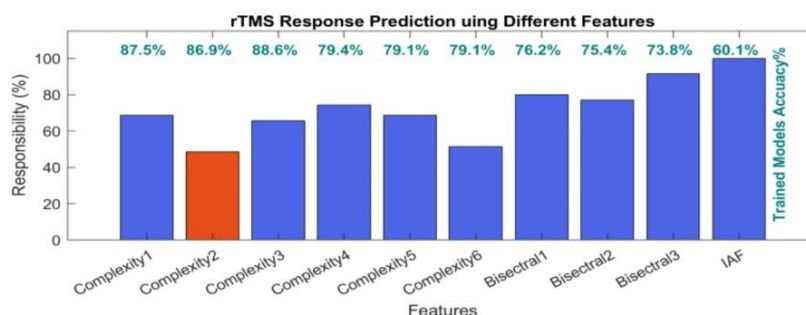
Distribution of Gender



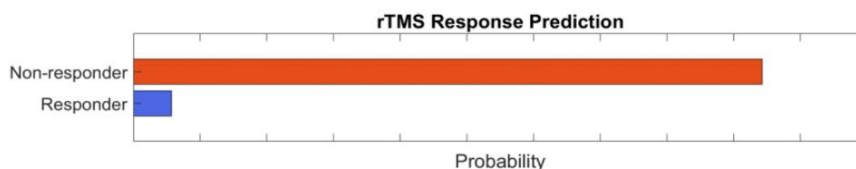
Distribution of Age



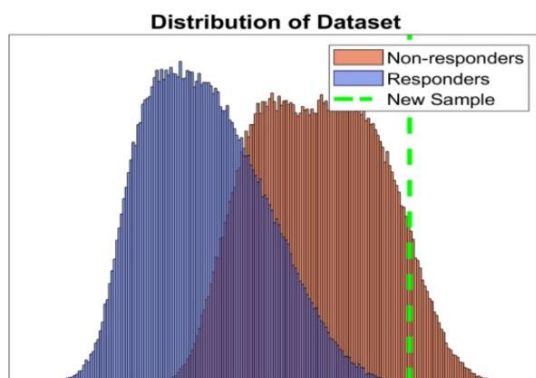
### Features Information



### Responsibility



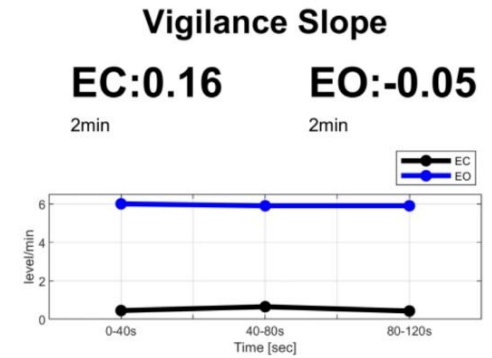
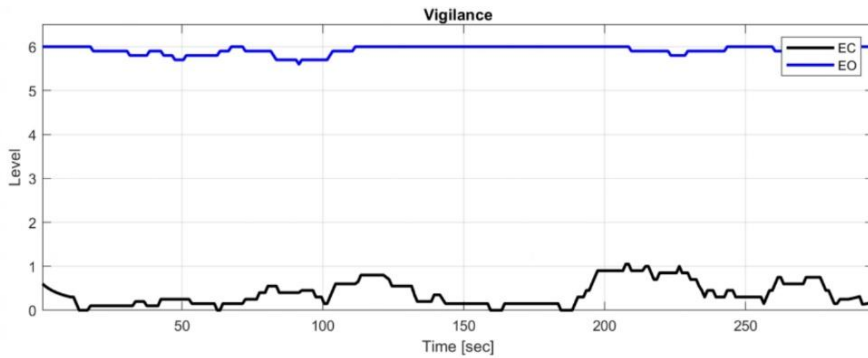
### Data Distribution



### 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

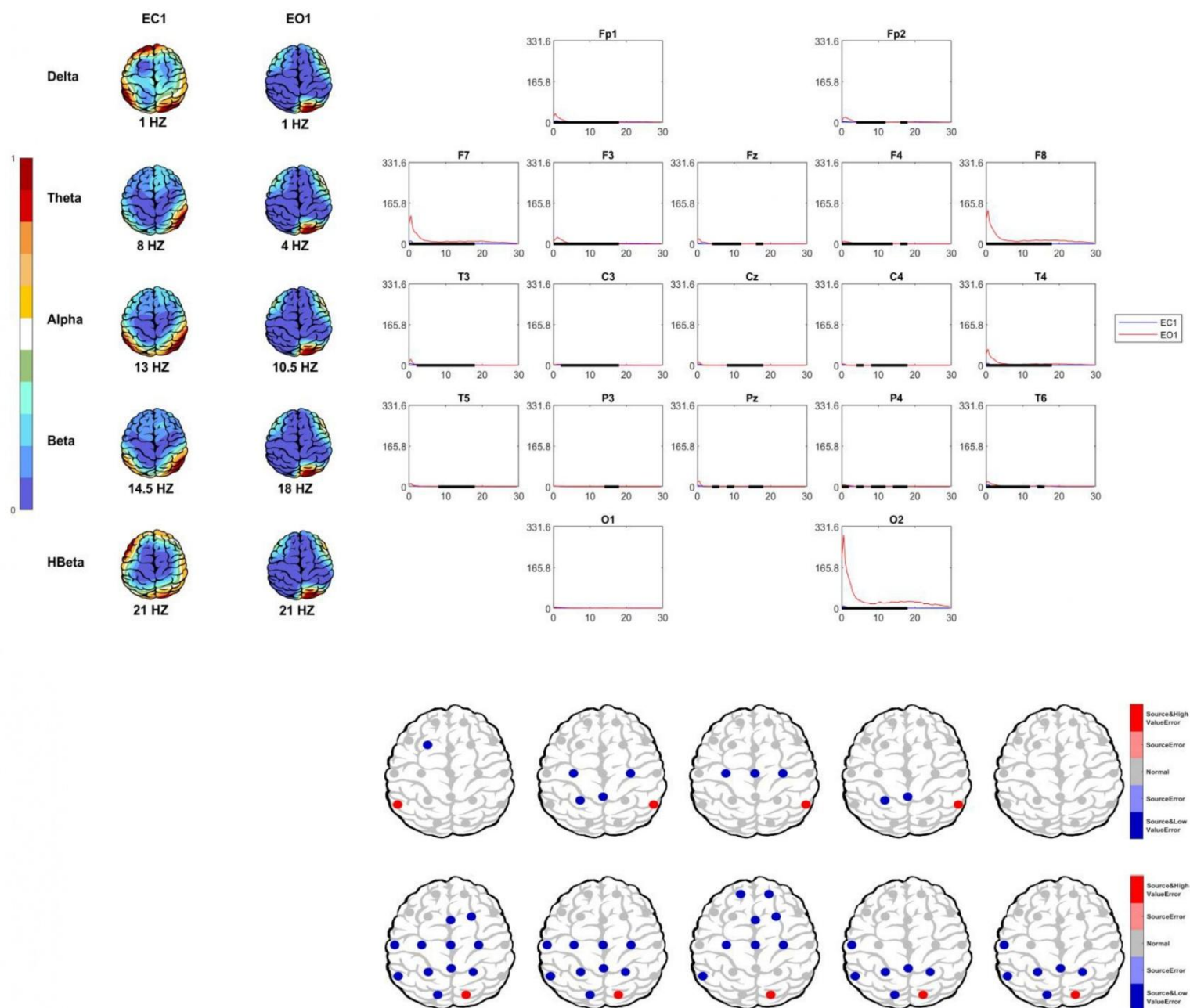


## EEG Neuromarker Values

Neuromarker	Region	Value	Assessment
APF - EO	Frontal	10.67	High
AFP - EC	Frontal	12.92	High
APF - EO	Occipital	12.00	High
AFP - EC	Occipital	13.88	High
Alpha Asymmetry - EO	Frontal	00.16	Anxiety
Alpha Asymmetry - EC	Frontal	-0.11	Anhedonia
Alpha Asymmetry - EO	Occipital	-0.91	Anhedonia
Alpha Asymmetry - EC	Occipital	-0.09	Anhedonia
Beta Asymmetry - EO	Frontal	00.45	Anhedonia
Beta Asymmetry - EC	Frontal	-0.04	Anxiety
Alpha Blocking	O2	-	Observed
Arousal Level - EO	-	-	Normal
Arousal Level - EC	-	-	High
Vigilance Level - EO	-	06.00	Normal
Vigilance Level - EC	-	00.00	Low
Vigilance Mean - EO	-	05.92	Normal
Vigilance Mean - EC	-	00.39	Low
Vigilance Regulation - EO	-	-0.05	Normal
Vigilance Regulation - EC	-	00.16	Normal
Vigilance 0 Stage (%) - EO	-	95.95	High
Vigilance 0 Stage (%) - EC	-	00.00	Normal
Vigilance A1 Stage (%) - EO	-	00.00	-
Vigilance A1 Stage (%) - EC	-	00.00	-



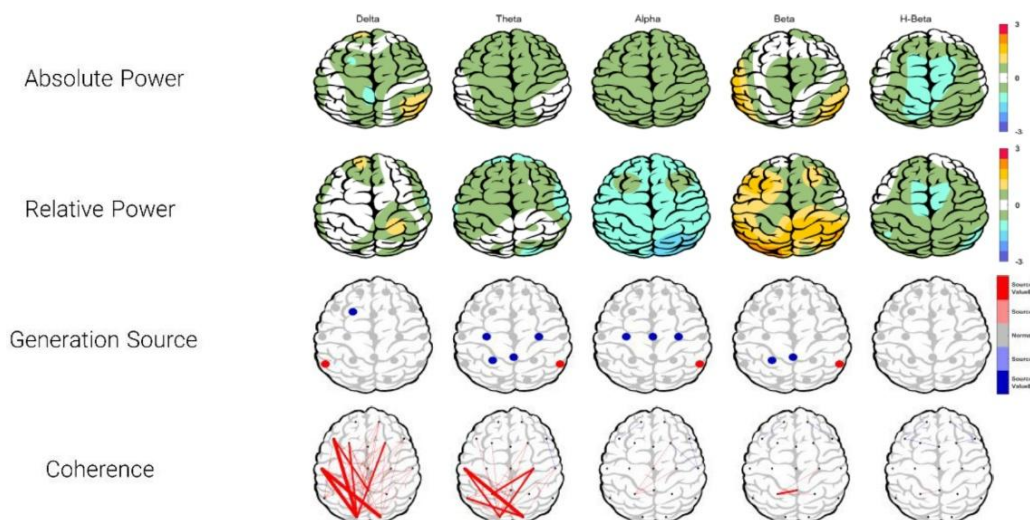
## EEG Spectra



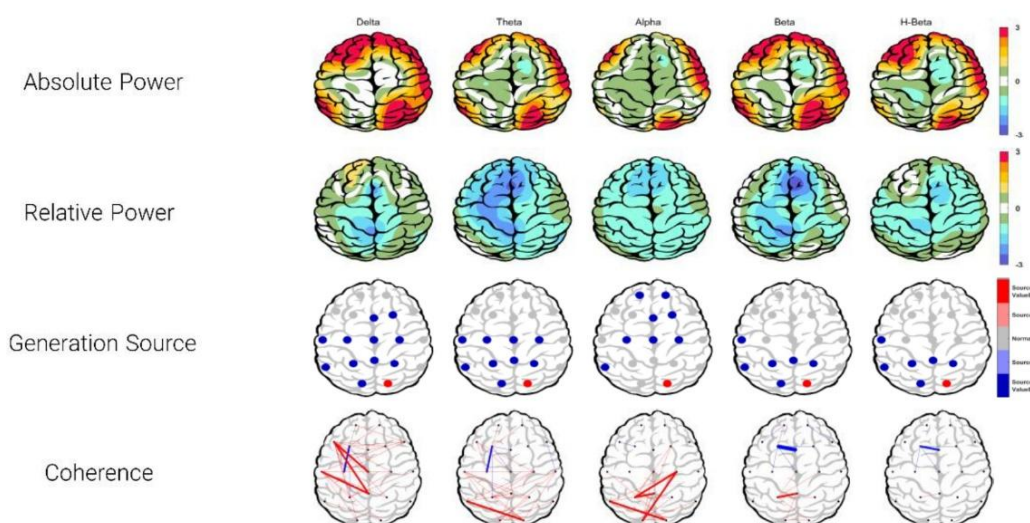


## Z Score Summary Information

■ Eye Close

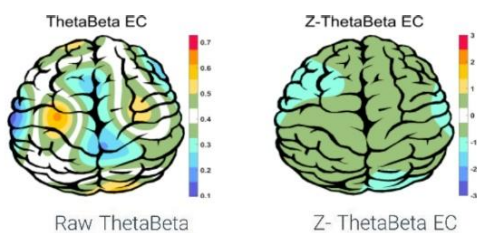


■ Eye Open

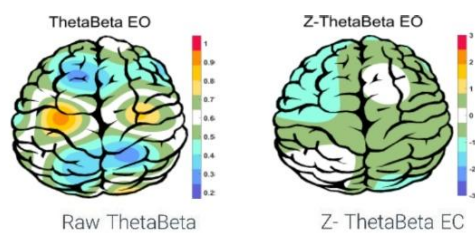


## Theta/Beta Ratio

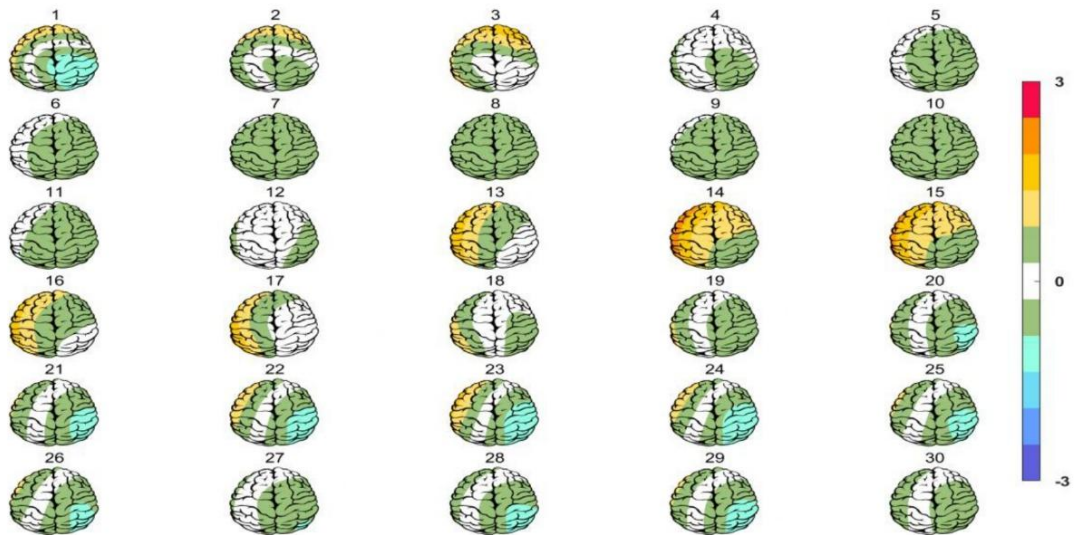
■ Eye Close



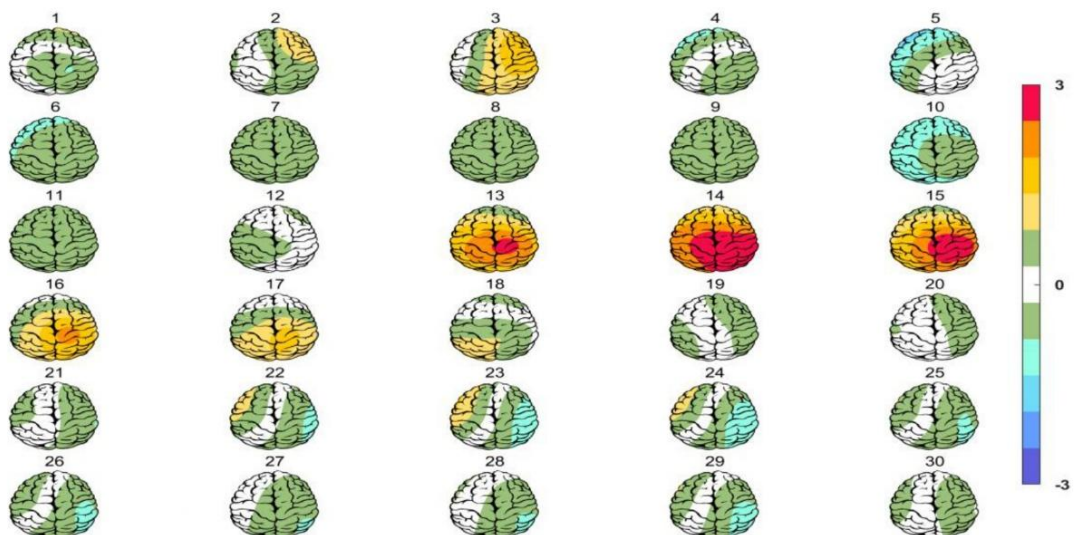
■ Eye Open



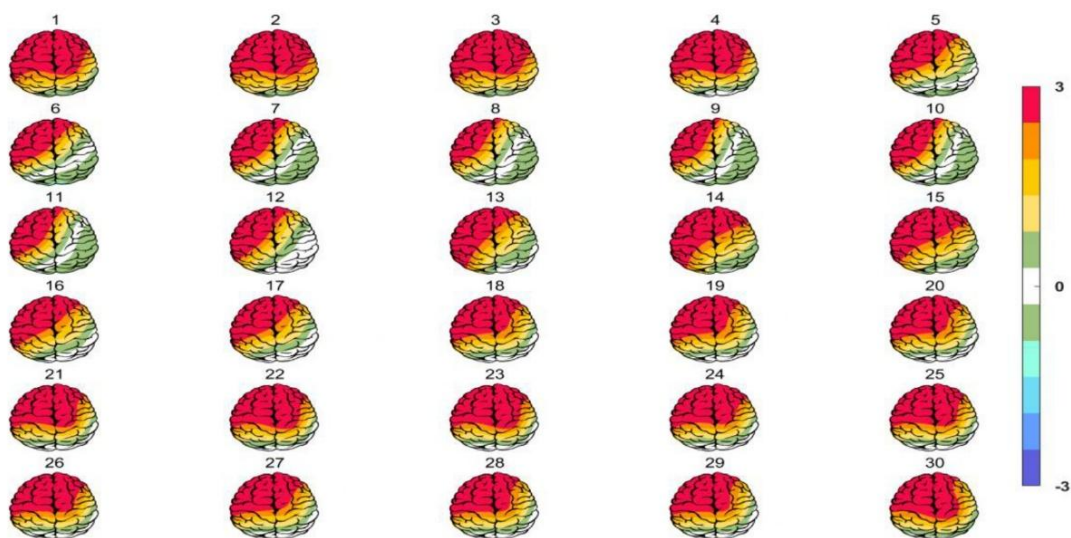
## Absolute Power-Eye Close



## Relative Power-Eye Close



## Absolute Power-Eye Open



## Relative Power-Eye Open

