



QEEG Clinical Report

BrainLens V0.4

Report Description



Personal & Clinical Data

Name	Akram Karbalaee	Date of Recording	2025-05-03
Date of Birth - Age	1983-04-12 - 42.1	Gender	Female
Handedness(R/L)	Right	Source of Referral	Dr Heydari
Initial Diagnosis	Mixed Depression and Anxiety		
Current Medication	-		

Dr Heydari

Summary Report

EEG Quality



Z-score Information

Compatibility with Depression

Compatibility with Anxiety

Compatibility with Mood Swing

TMS Responsibility

Arousal Level

Cognitive Performance

Absolute Power
Relative Power

APF

Posterior APF-EC= 11.12

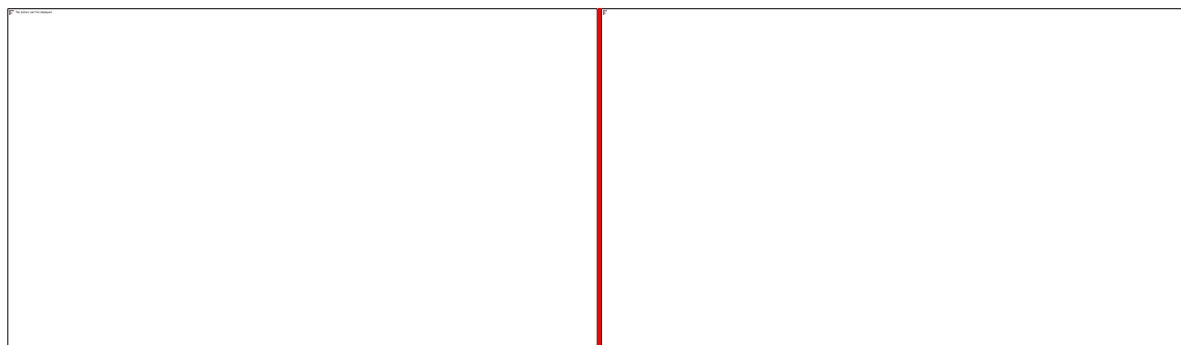
Posterior APF-EO= 11.00

To investigate QEEG-based predicting medication response, please refer to the Report.

Denoising Information (EC)

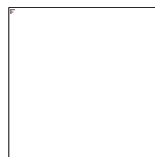
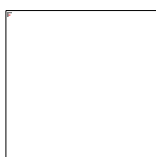
Raw EEG

Denoised EEG



Flat Channels

Rejected Channels

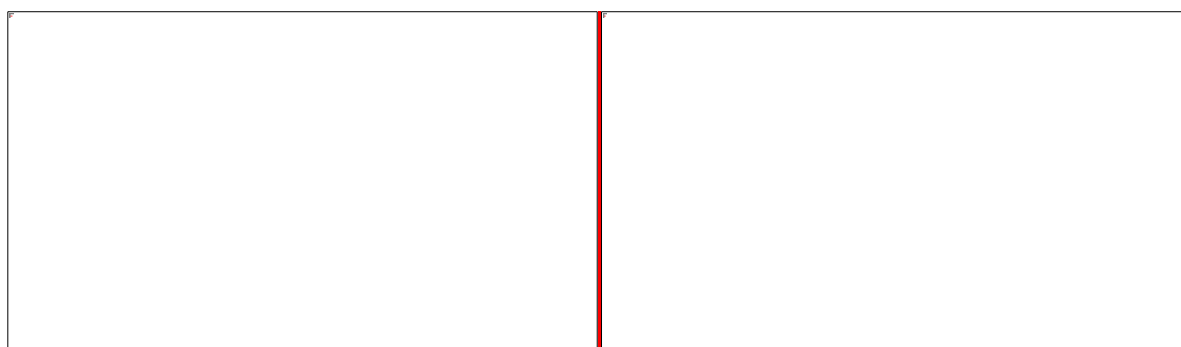


Number of Eye and Muscle Elements				Low Artifact Percentage	
Eye	3	Muscle	0		
Total Artifact Percentage				High Artifact Percentage	
EEG Quality		good		Total Recording Time Remaining	197.58 sec

Denoising Information (EO)

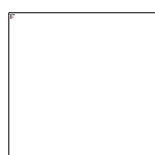
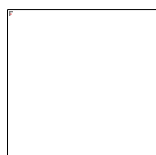
Raw EEG

Denoised EEG



Flat Channels

Rejected Channels



Number of Eye and Muscle Elements				Low Artifact Percentage	
Eye	1	Muscle	1		
Total Artifact Percentage				High Artifact Percentage	
EEG Quality		good		Total Recording Time Remaining	191.43 sec

Pathological assessment for mood disorders and adult ADHD

Compare to Mood Disorders Database

Compare to Adult ADHD Database

EEG Compatibility with Depression Diagnosis

EEG Compatibility with Anxiety Diagnosis

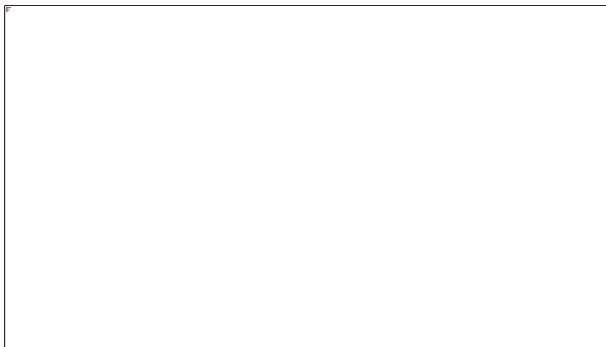
EEG Compatibility with Mood Swing Diagnosis *

* This index can only be investigated if there are symptoms of mood swings (R/O BMD or R/O mood swings).

Depression and Adult ADHD Diagnosis Probabiliy



Cognitive Functions Asessment



Arousal Level Detection



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

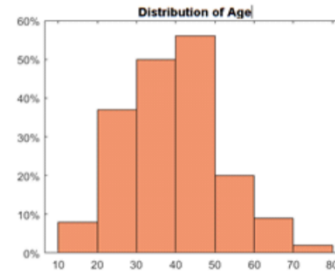
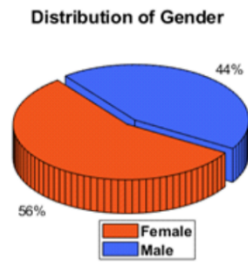
These two charts, calculate response probability to various medications, according only to QEEG indicators. Blue charts favor drug response and red charts favor drug resistance. The longer the bar, the more evidence there is in the articles. Only drugs listed in the articles are listed. These tables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

rTMS Response Prediction

Network Performance

Accuracy: 92.1%
Sensitivity: 89.13%
Specificity: 97.47%

Participants Information



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.



NPCindex



QEEGhome

Akram Karbalaee\Dr Heydari

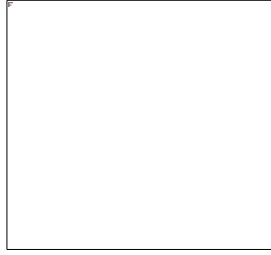
APF(EO)



Frontal APF= 11.00

Posterior APF= 11.00

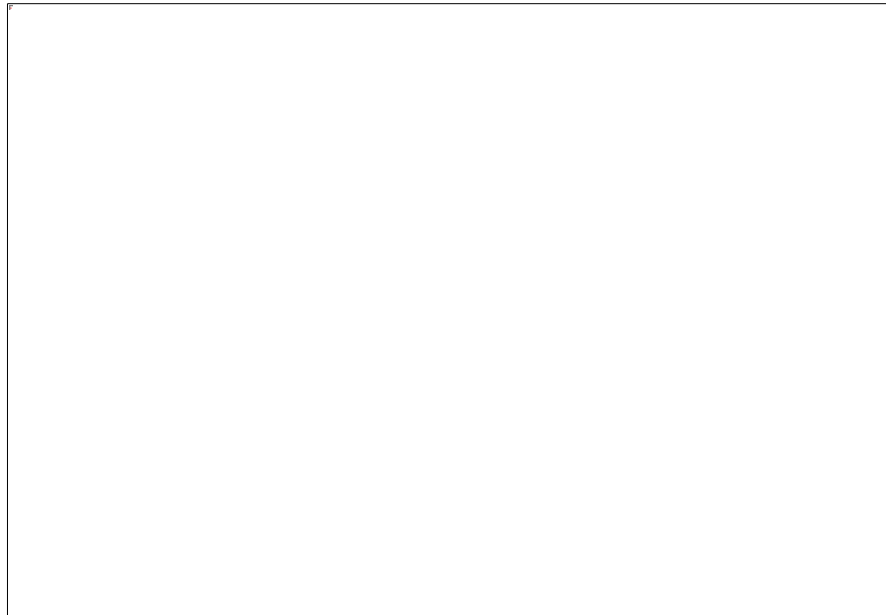
APF(EC)



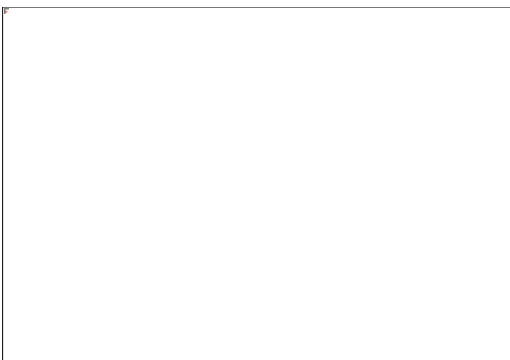
Frontal APF= 11.00

Posterior APF= 11.12

EEG Spectra



Alpha Asymmetry(AA)



Alpha Blocking



 Z Score Summary Information (EC)

Absolute Power	
Relative Power	
Coherence	

 Z Score Summary Information (EO)

Absolute Power	
Relative Power	
Coherence	

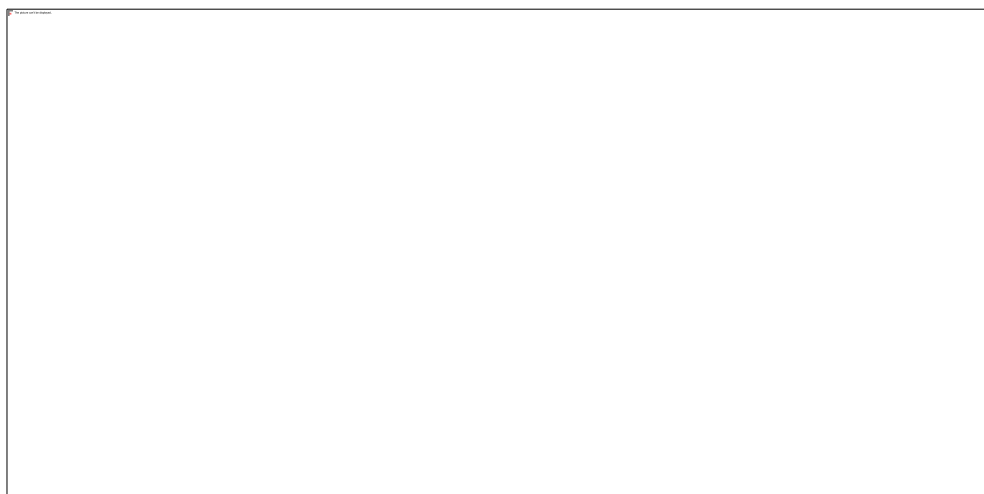
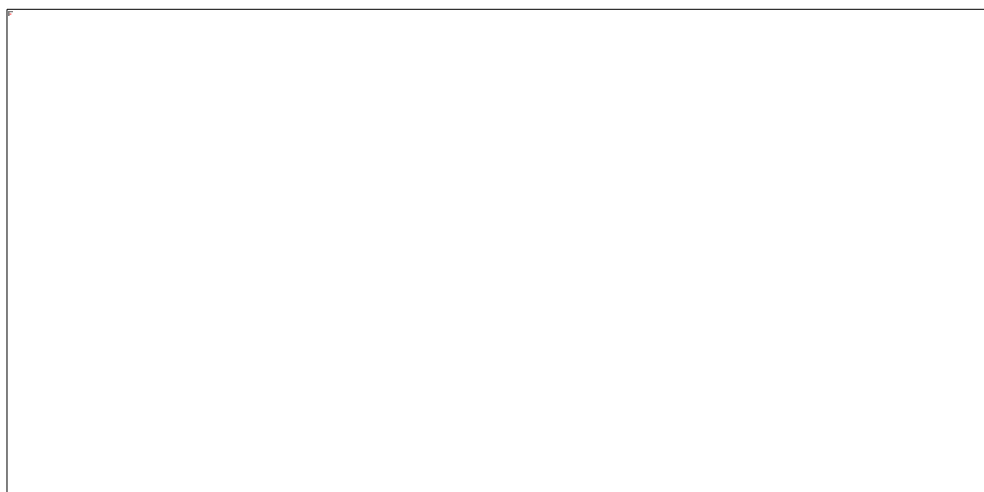
 E.C.T/B Ratio (Raw- Z Score)

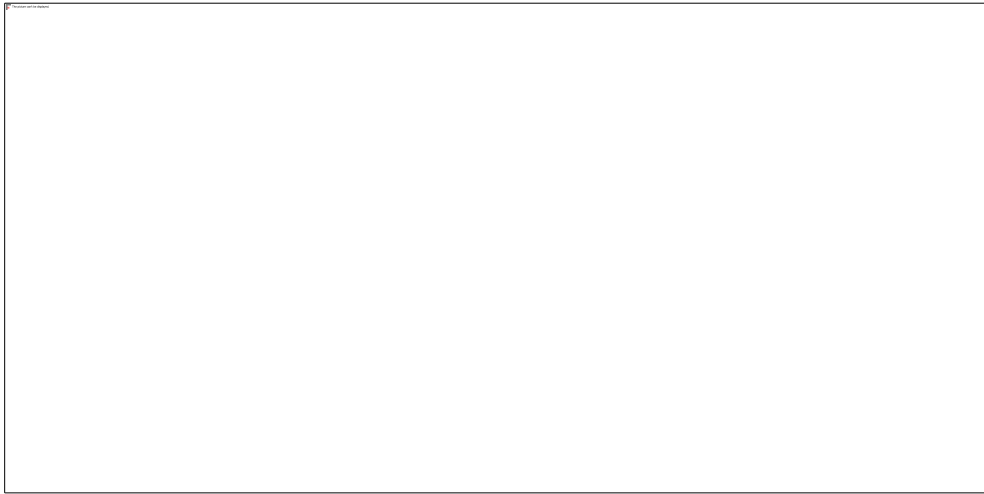
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 Arousal Level

 E.O.T/B Ratio (Raw- Z Score)

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 Absolute Power-Eye Closed (EC) Relative Power-Eye Closed (EC)

 Absolute Power-Eye Open (EO)  **Relative Power-Eye Open (EO)** 