



July 24th, 2015

qEEG Test Analysis – Summary of Findings

General information:

Patient M. S. (full name omitted to protect patient privacy); born 24 February 2003.

An EEG test was performed with eyes open (4 minutes) and eyes closed (4 minutes).

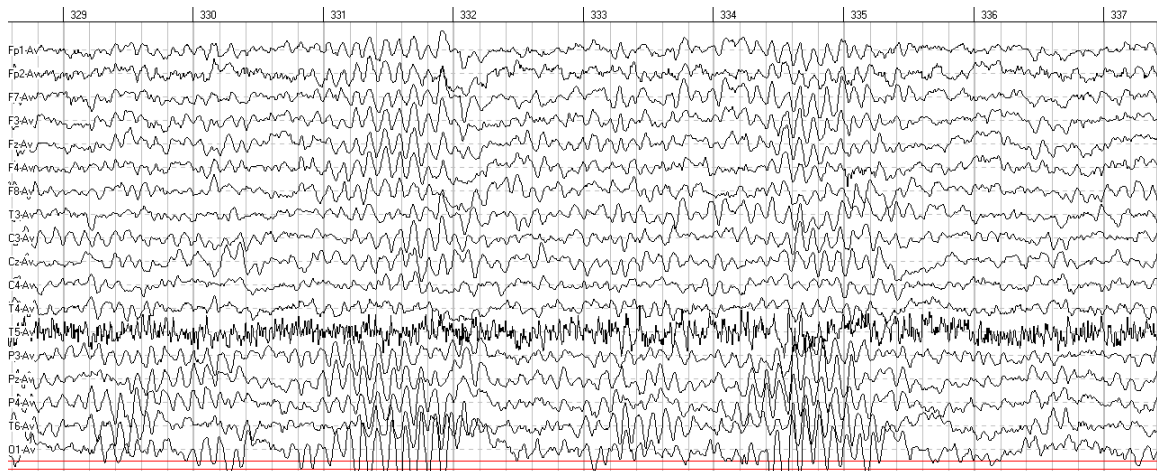
The test was performed with the MITSAR system. The impedance level on all electrodes during the test was within the acceptable range. Before analyzing the qEEG test, the EEG chart was scanned for artifacts and for segments of special interest (such as irregular spike-and-wave discharges). Sections of the EEG chart that contained artifacts were excluded, as is the acceptable practice in qEEG test analysis. The chart was checked in a number of different montages. The qEEG analysis was performed with the WinEEG software.

As is the accepted practice in the world of medicine, all tests were performed with a statistical certainty level of 95%.

Chart Analysis:

Eyes Open:

Checking the absolute values with eyes open reveals an excess of Alpha activity all over the head and an excess of temporal Theta activity on the left regions of the brain. The Theta to Beta ratio is high.



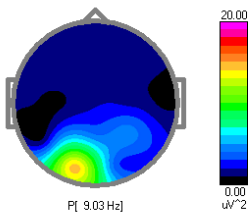
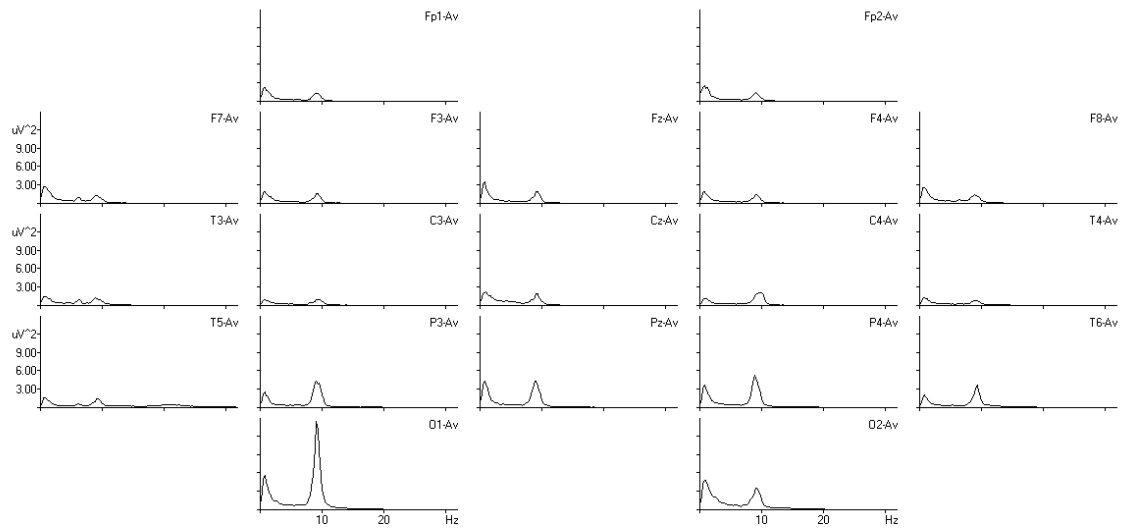


Spectra

Graphs of EEG power spectra:

Fragment:

Eyes opened 10:28:16, Offset: 0.00s, Length: 378.05s, Number of epochs 162.



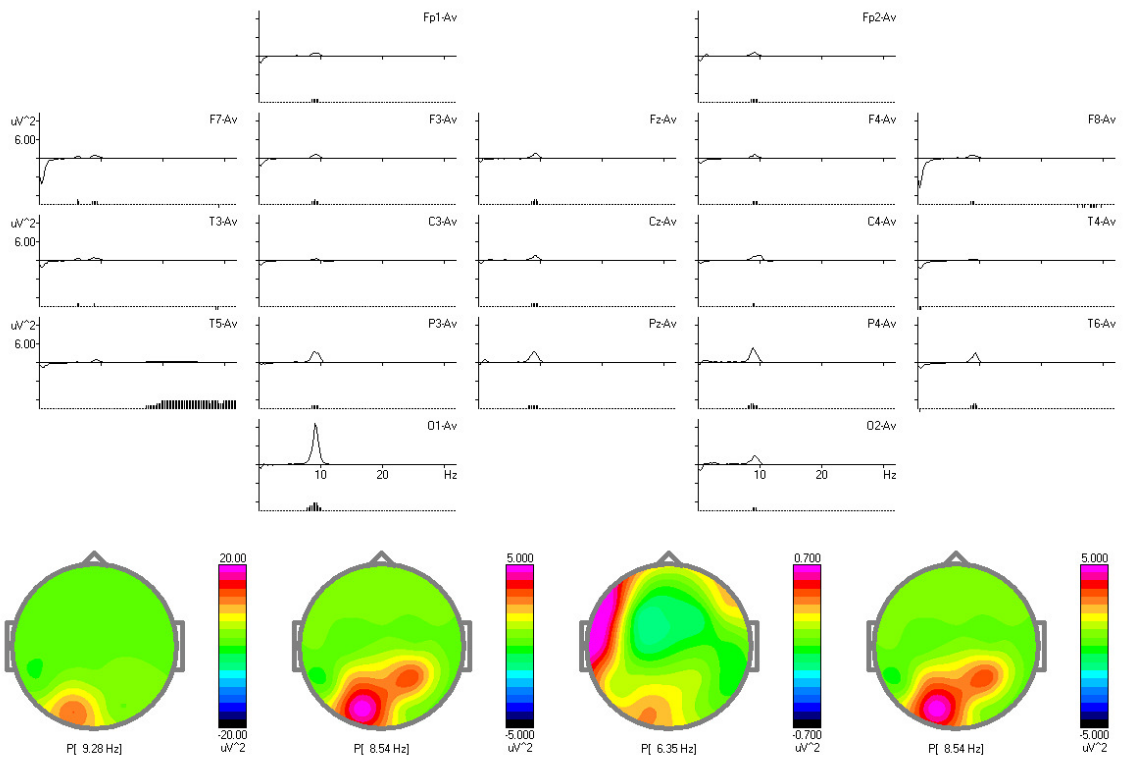


Comparison to age norms:

Graphs of EEG power spectra:

Fragment:

Eyes opened 10:28:16, Offset: 0.00s, Length: 378.05s, Number of epochs 1.



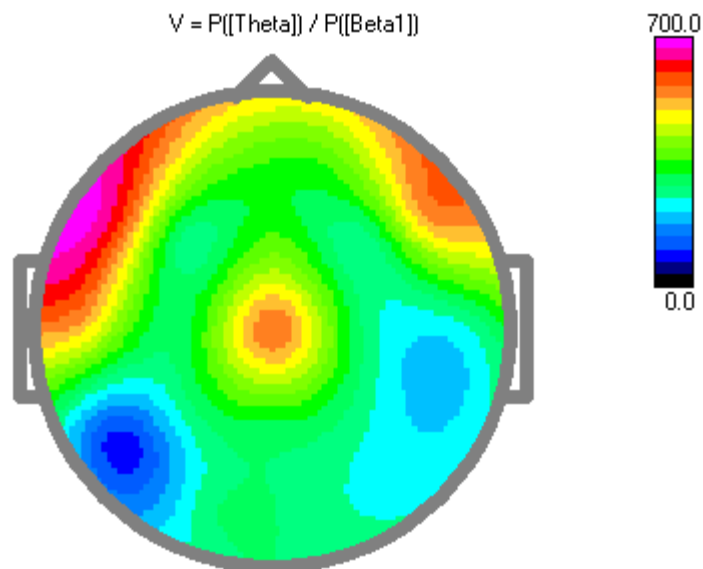


Maps of relative EEG power spectra:

Fragment:

Eyes open 10:28:16, Offset: 0.00s, Length: 378.05s, Number of epochs 162.

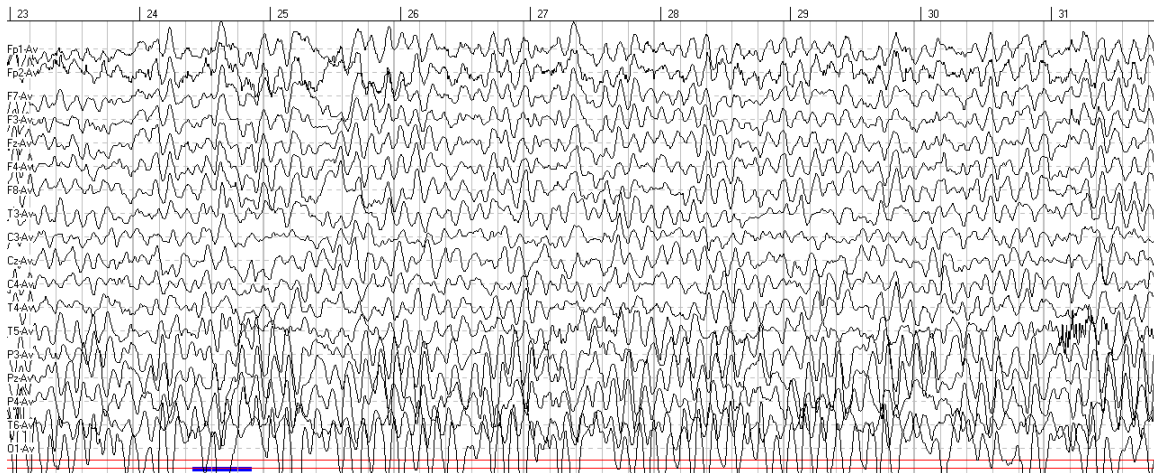
$$V = P([\text{Theta}]) / P([\text{Beta1}])$$





Eyes closed:

Checking the absolute values with eyes closed reveals excess of Alpha activity all over the head, and excess of Theta power Parietally. The Theta to Beta ratio is high.



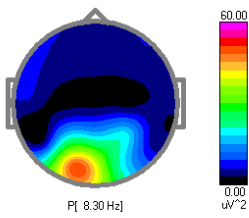
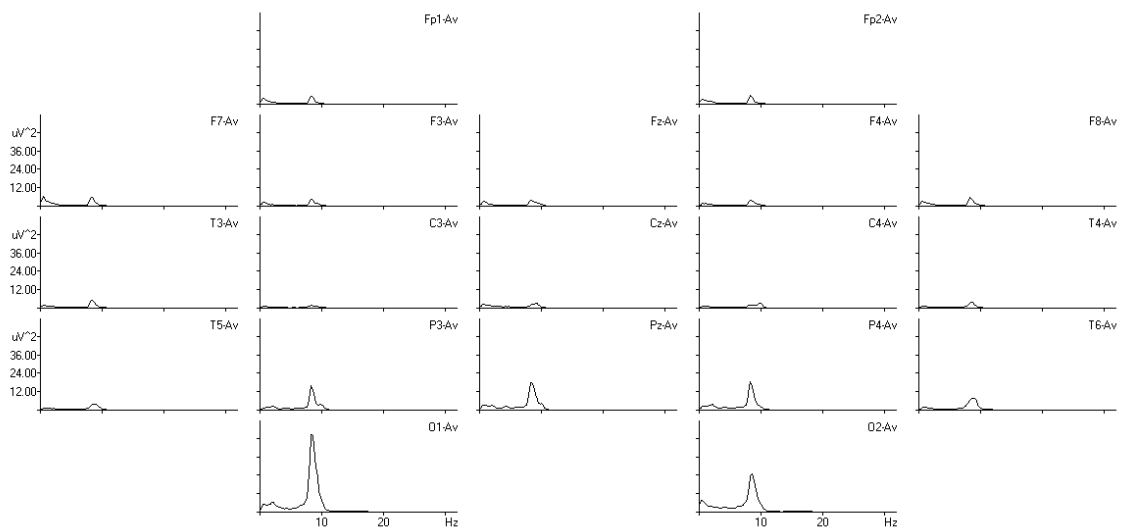


Spectra

Graphs of EEG power spectra:

Fragment:

Eyes closed 10:36:15, Offset: 0.00 s, Length: 317.15 s, Number of epochs 121.



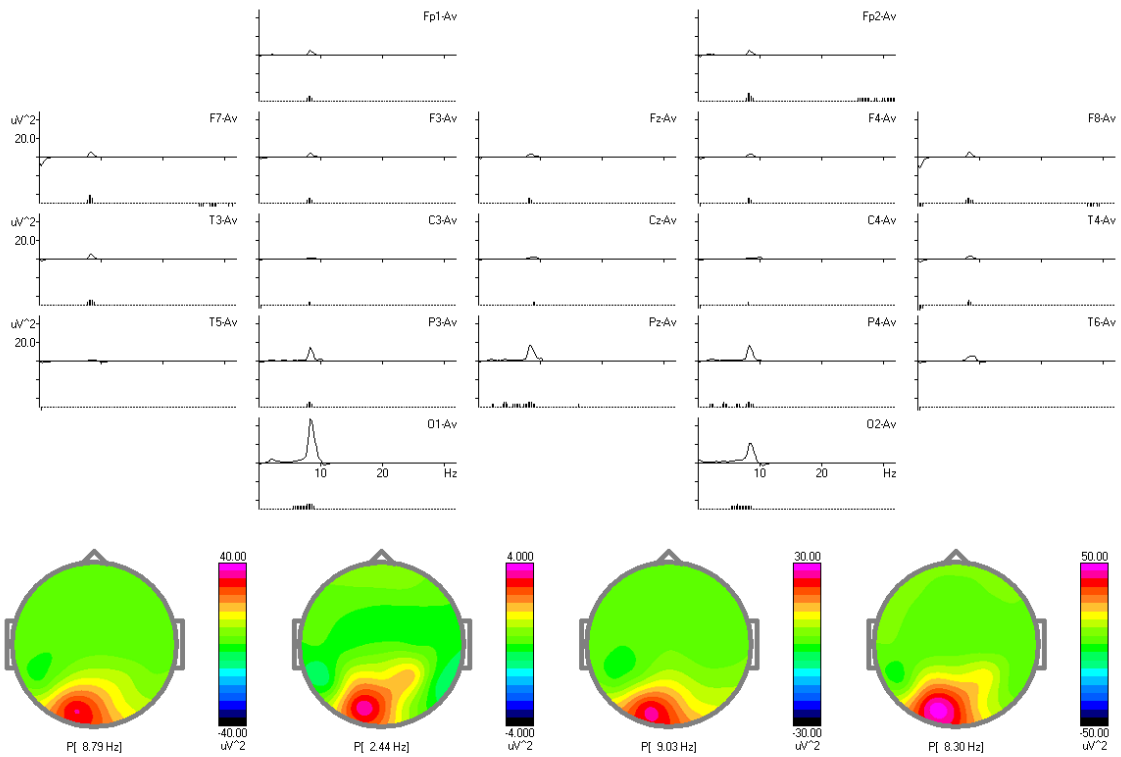


Comparison to age norms:

Graphs of EEG power spectra:

Fragment:

Eyes closed 10:36:15, Offset: 0.00 s, Length: 317.15 s, Number of epochs 1.



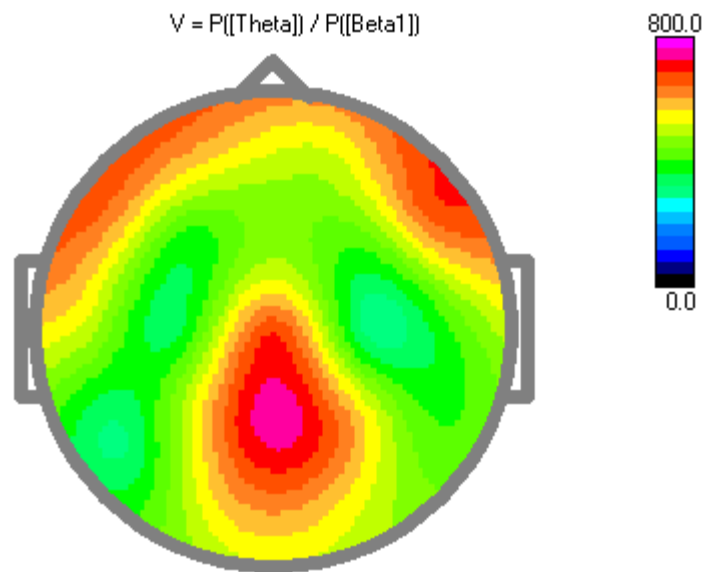


Maps of relative EEG power spectra:

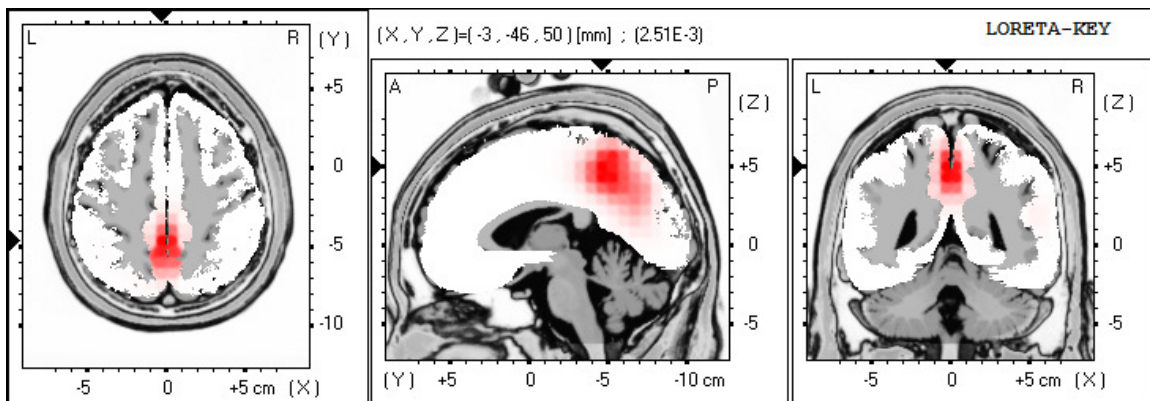
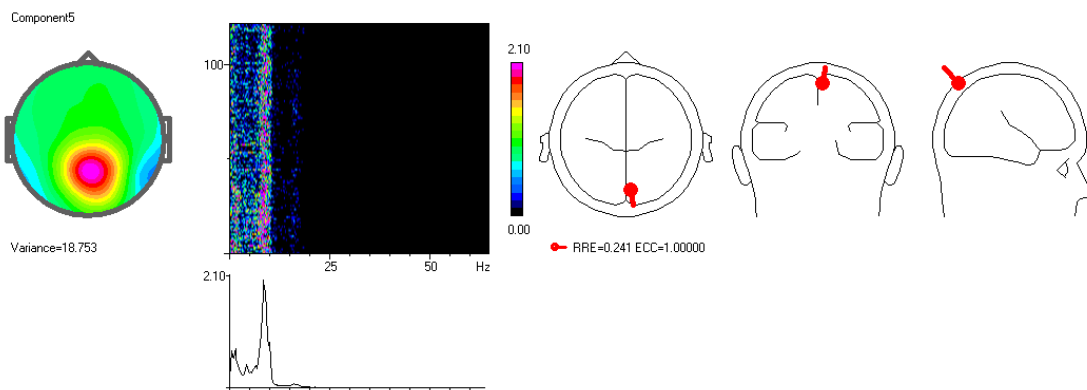
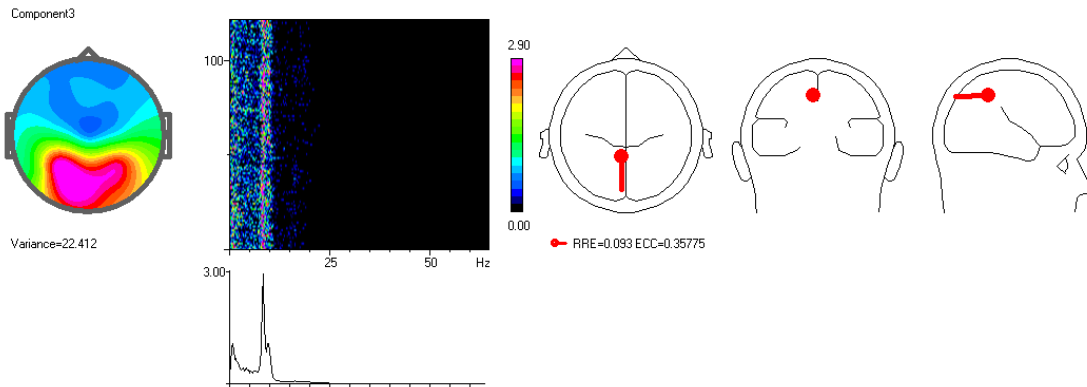
Fragment:

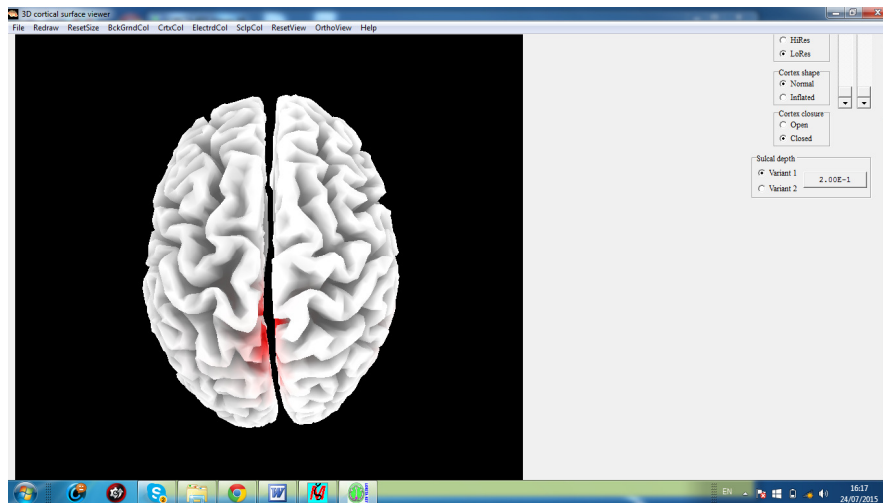
Eyes closed 10:36:15, Offset: 0.00s, Length: 317.15s, Number of epochs 121.

$$V = P([\text{Theta}]) / P([\text{Beta1}])$$



Considerations involved in choosing the treatment protocol





Conclusions and recommendations:

The EEG chart reveals paroxysmal Alpha activity with eyes open, and excessive Alpha activity with eyes closed.

The qEEG test analysis reveals:

- Excess of Alpha activity all over the head, and excess of Theta activity on the left temporal lobe with eyes open.
- Excess of Alpha activity all over the head and excess of parietal Theta activity with eyes closed.
- The Theta to Beta ratio is high.

It is possible that the excessive Alpha activity that was revealed in the test is related to the patient's use of homeopathic drugs. The ingredient content of these drugs is unknown. It is recommended to add behavioral therapy and parent counseling as a complementary treatment to neurofeedback.



Recommended Neurofeedback Protocol:

- Rewarding 13-16 hertz on C4 (at first stage).
- After 20 sessions, and according to the clinical progress achieved, we recommend also inhibiting 3-9 hertz on Pz.

**Sincerely,
qEEG analysis unit**



Note:

1. This test does not serve as a diagnosing test for Epilepsy. The testing procedure does not trigger epileptic activity in epileptic foci. If there is suspicion of a seizure disorder, the patient has to visit a neurologist.
2. This test includes an analysis of the qEEG test and does not constitute a medical opinion.