#### **3D Model analysis**

This is an analysis by Standardized low-resolution brain electromagnetic tomograph that known as **swLORETA EEG analysis**.

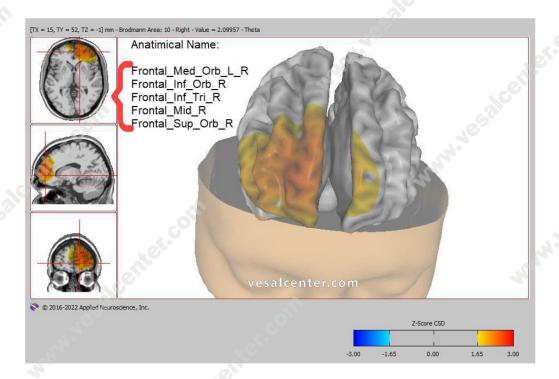
- This is an analysis by NeuroGuide software Ver: 3.2.6 An <u>FDA registered software</u> 510(k) for EEG analysis.
- EEG is recorded by Mitsar EEG amplifier as An FDA registered device 510(k).
- swLORETA using a mathematic model to reduce noises and artifacts then source localized the brain waves and compare with z-scores.
- This brain waves intensity is standardized by age and sex.
- This type of analysis includes brain wave source localizing.
- Difference of this analysis in artifact rejection is based on new mathematic model.
- Report just includes most important sign, not all possibilities.
- All signals collected by isolating from environmental noises by electrical wave correction (SDC3000XRT), Electrocap EEG cap, and impedance less than  $20k\Omega$ .
- Visual Guide line for EEG wave intensity and brain connectivity is:
  Gray = intensity is Normal | Red = intensity is more than Normal | Blue = intensity is lesser than Normal
- qEEG analysis in this case with Eye Open condition.

#### **Delta Power,** intensity in 3D model, Source Localized (swLORETA)



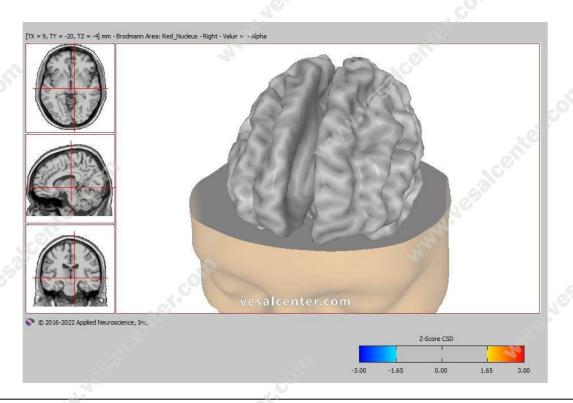
Comment: Delta Power is Normal based on Age and Sex

## Theta Power, intensity in 3D model, Source Localized (swLORETA)



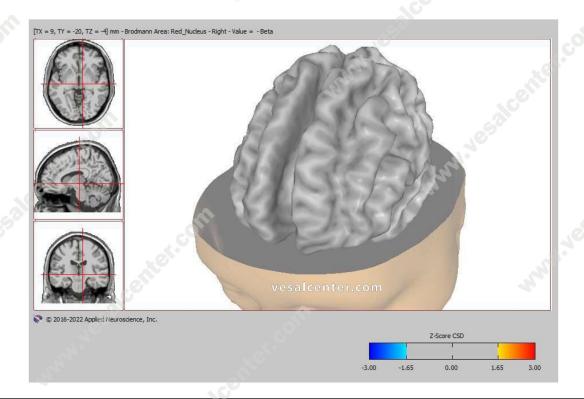
**Comment: Theta** Power is **Abnormal** based on Age and Sex

## **Alpha Power,** intensity in 3D model, Source Localized (swLORETA)



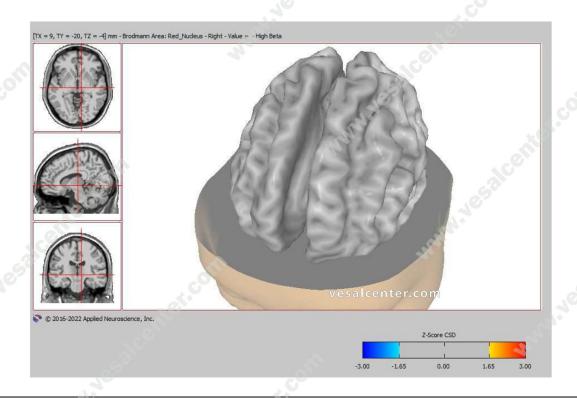
Comment: Alpha Power is Normal based on Age and Sex

# Beta Power, intensity in 3D model, Source Localized (swLORETA)



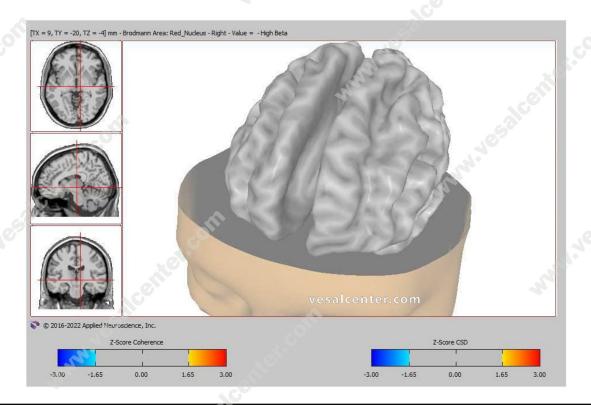
Comment: Beta Power is Normal based on Age and Sex

#### High Beta Power, intensity in 3D model, Source Localized (swLORETA)



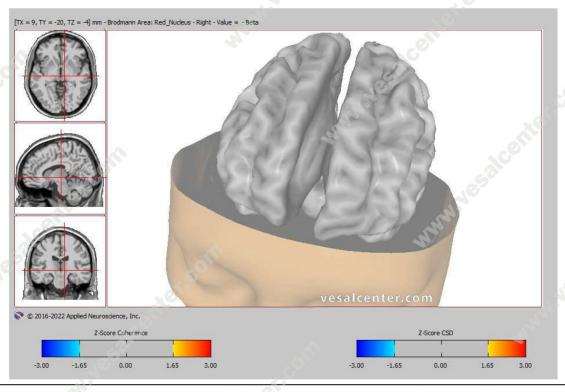
Comment: High Bata Power is Normal based on Age and Sex

## **Anxiety – Brain connectivity in High Beta**



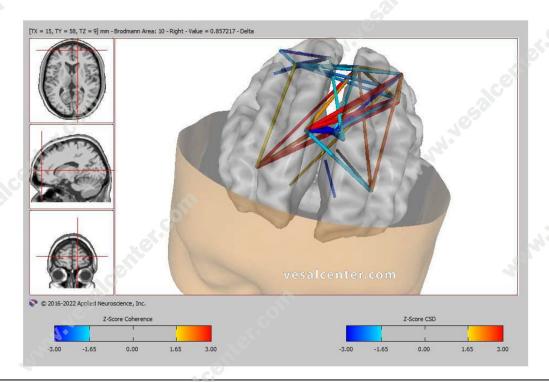
Comment: High Beta brain connectivity in Anxiety symptom network is Normal

#### Working Memory – Brain connectivity in Beta



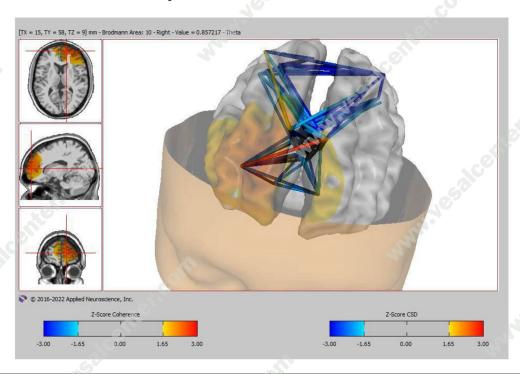
Comment: Beta brain connectivity in Working Memory symptom network is Normal

## Pain - Brain connectivity in Delta



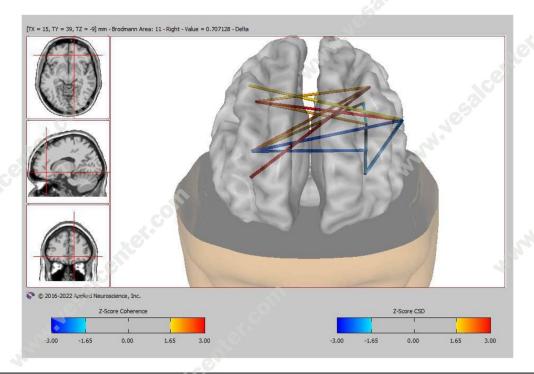
Comment: Delta brain connectivity in Pain symptom network is Abnormal

# Pain – Brain connectivity in Theta



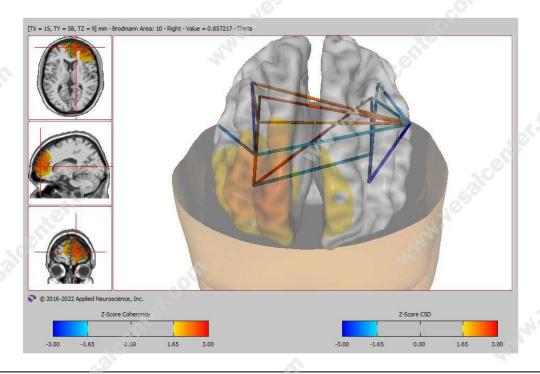
Comment: Theta brain connectivity in Pain symptom network is Abnormal

## Migrena - Brain connectivity in Delta



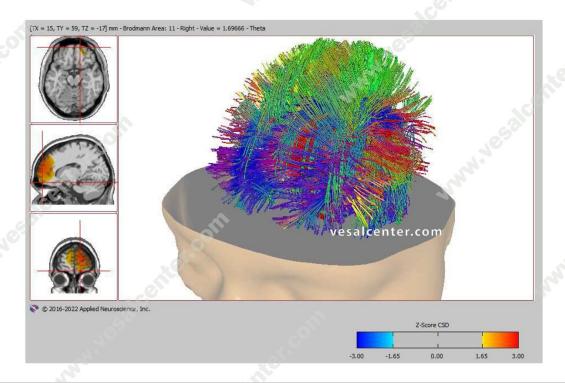
Comment: Delta brain connectivity in Migrena symptom network is Abnormal

## Migrena - Brain connectivity in Theta



Comment: Theta brain connectivity in Migrena symptom network is Abnormal

# DTI Model – Based on EEG findings and swLORETA modeling



**Comment:** This DTI model is based on EEG signals that interpreted by swLORETA algorithm and using NeuroGuide FDA registered database.