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DIAGNOSTIC TOOL FOR MAJOR DEPRESSIVE DISORDER AND BIPOLAR DISORDER

DIAGNOSTICS

Non-invasive test that differentially diagnoses Bipolar Disorder and Major Depressive Disorder in adolescent patients with almost 90 percent accuracy.

TECHNOLOGY TYPE

Imaging
Magnetic Resonance Spectroscopy
Neuroimaging
Bipolar Disorder
Major Depressive Disorder
Software

STAGE OF DEVELOPMENT

- Algorithm developed.

- Additional studies and reimbursement strategy required.

IP PROTECTION

Nationalized PCT Pending in the United States

Diagnosis of Affective Disorders Using Magnetic Resonance Spectroscopy Neuroimaging
WO2015171870A1

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Reference Number: U-5728

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TECHNOLOGY SUMMARY

Similar presenting symptoms make it difficult to distinguish between Bipolar Disorder (BD) and Major Depressive Disorder (MDD) leading nearly 70 percent of patients to be misdiagnosed initially. Incorrect diagnoses results in delays in appropriate treatment and increased costs to the healthcare system. Adolescents experience higher choline levels in the anterior cingulate cortex when suffering from MDD than BD. Magnetic Resonance Spectroscopy (MRS) provides information regarding the biochemistry of specific regions in the brain.

A novel algorithm, developed by researchers at the University of Utah, processes spectroscopic data to provide total choline levels, which can then differentiate between the two diseases. Additional scans can be used to assess efficacy of prescribed treatments for both diseases by comparing current choline levels to the patient's initial scan and levels of healthy patients.

FEATURES AND BENEFITS

- Enables clinicians to rapidly, differentially diagnose MDD or BD using safe, non-invasive measurements.
- Facilitates faster delivery of appropriate treatment.
- Increases accuracy of initial diagnosis.

RECENT PUBLICATIONS

Shi, Xian-Feng et al. Anterior cingulate cortex choline levels in female adolescents with unipolar versus bipolar depression: A potential new tool for diagnosis. *Journal of Affective Disorders*, 167 (2014): 25–29. PMC. doi: 10.1016/j.jad.2014.05.051

INVENTOR PROFILE

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