Combinostics

cNeuro cDSI

Aiding differential diagnostics in dementia

HIGHLIGHTS

- **Cloud-based tool running in a web browser.**
- **Comparison of patient's data to data from previously diagnosed patients providing a quantitative estimate about patient's similarity to different disease groups.**
- **Patient data supported: clinical and neuropsychological test data, MRI imaging biomarkers, CSF biomarkers and APOE gene.**
- **Interactive visualization of the similarity.**
- **Decision models for etiology and progression.**

cNeuro® cDSI is a tool for clinical decision support in dementia based on a combination of imaging, lab results and clinical data

In clinical diagnostics, the role of quantitative data acquired, e.g., from clinical and neuropsychological tests, imaging and lab tests is increasing. Interpretation of all these, sometimes contradictory, data is challenging, especially when simultaneously keeping in mind patient demographics, increasing knowledge on disease subtypes and existing economic constraints for acquiring data. cDSI helps to systemize this interpretation and make it more quantitative.

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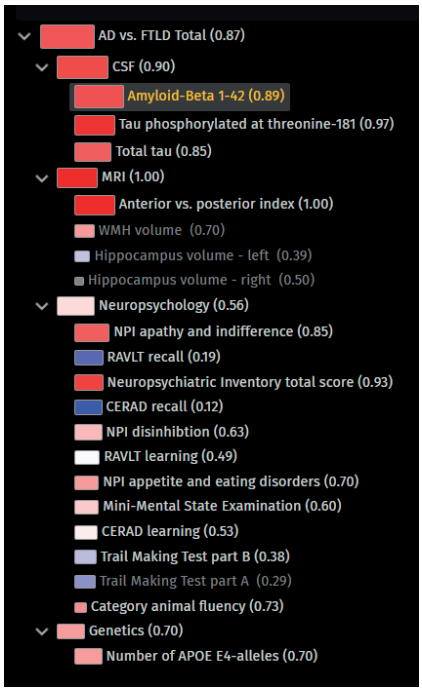
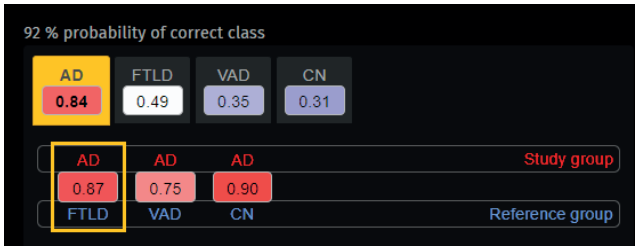
FEATURES

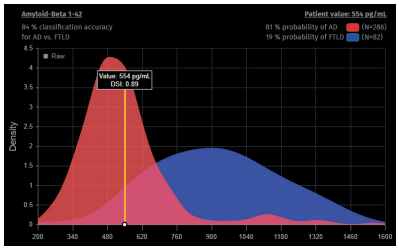
- Cloud-based – software runs in a standard web browser.
- Computation of disease state index measuring the similarity of the patient to previously diagnosed patients.
- Data sources supported:
  - Clinical and neuropsychological tests: MMSE, RAVLT/CERAD recall & delayed recall, TMT A&B, Animal fluency, NPI.
  - MRI imaging biomarkers from cMRI: volume (US and EU versions) and computed MTA, GCA (global and local), Fazekas (EU version)
  - Biomarkers: CSF biomarkers, APOE.
- Decision models available:
  - Etiology: Alzheimer's disease (AD), frontotemporal lobar degeneration (FTLD), vascular dementia (VaD), cognitively normal (CN).
  - Progression: stable and progressive mild cognitive impairment.
- Compact visualization of all data using the patented disease state fingerprint technology.



Disease state fingerprint comparing AD and FTLD. Red indicative to AD and blue to FTLD.



Decision model for etiology showing the highest similarity to AD.



Distributions of beta amyloid CSF biomarker in AD (red) and FTLD (blue) groups and the value measured for the patient (yellow).

U.S. Patents No. 7,840,510 and 10,372,786

Security

- All data transfer uses SSL encryption and stored data are anonymized and encrypted.
- More information in separate security statement.

System Requirements

- Supported web browsers: Google Chrome, Firefox and Internet Explorer 11 or later.
- Recommended display resolution 1680 x 1050 or higher.

Regulatory Compliance

CE marked and excluded from the definition of a medical device in the U.S., based on section 520(o)(1)(E) of the Food Drug and Cosmetic Act.

Indications for Use

cNeuro® cDSI is intended for use by health care professionals to aid in diagnosing patients with a suspected neurodegenerative disorder. Patient parameters and test results are entered manually by the healthcare practitioner or retrieved through integration with other hospital systems. The device suggests whether the patient's condition meets the definition of different neurodegenerative disorders through a comparison of the patient's data with data from patients previously diagnosed based on established guidelines. The software is intended for the purpose of enabling healthcare professionals to independently review the basis for such recommendations. It is not the intent that the healthcare professional relies primarily on the software's recommendations to make a clinical diagnosis or treatment decision regarding an individual patient. Patient data may include biomarkers from cerebrospinal fluid and imaging, as well as results from various neuropsychological and clinical tests. The intended user profile covers healthcare professionals who work with patients being evaluated for a suspected neurodegenerative disease. The intended operational environment is an office-like environment with a computer.

Combinostics cNeuro Partnerships:

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Solution partner

Digital Ecosystem

SIEMENS Healthineers