

## Ignite - a novel computerized cognitive assessment battery for frontotemporal dementia

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**Background:** Ignite is a novel tablet-based battery, designed to allow for more sensitive detection of cognitive impairment in FTD. Ignite includes 12 tests measuring aspects of executive function and social cognition as well as other cognitive domains.

**Methods:** Ignite was tested in a clinically normal cohort ( $N=2,004$ ) aged 20-80 in to generate a normative calculator for raw scores. Estimated  $z$ -scores were calculated for all tests based on a linear regression model. Ignite was administered in at-risk participants from the Genetic FTD Initiative (GENFI) study with analysis performed in an initial cohort of mutation carriers,  $n=31$ , average (standard deviation) age at testing of 42.2 (9.6), and non-carriers,  $n=16$ , age 42.3 (10.1). Age-, sex- and education-adjusted normative values were calculated for the GENFI participants.

**Results:** The Ignite tests were shown to be sensitive to expected age-, sex-, and education-related effects in the normal population. Presymptomatic mutation carriers performed worse than non-carriers on the Colour Mix test (a version of the Stroop task) with 7% of the mutation carriers scoring below the 1st percentile (compared to 0% of the non-carriers). On the Mind Reading task of social cognition, 16% of mutation carriers scored below the 10th percentile (compared to 0% of the non-carriers).

**Conclusion:** A normative score calculator was created for the Ignite app to guide interpretation of individual performances and detect subtle cognitive impairment in FTD. Preliminary results suggest Ignite tests are sensitive in detecting deficits in executive function and social cognition in a population of presymptomatic FTD mutation carriers.

### Conflicts of interest

None