sysmex

Automated Immunoassay System HISCL

Early detection of Alzheimer's disease with a simple blood test

$A\beta_{1-40}$

$A\beta_{1-42}$

Together for a better
healthcare journey

First CE-marked immunoassay for pre-screening with blood samples

For a long time, reliable detection of β-amyloid was only possible from CSF or using imaging techniques (e.g., amyloid PET). Even in cases where these procedures are medically necessary, they are often invasive or expensive. With the help of highly sensitive procedures such as the Sysmex Automated Immunoassay System HISCL, biomarkers for early detection of Alzheimer's disease – such as the β-Amyloid 1-42/1-40 ratio – can now be measured from blood samples. This makes diagnostics less risky, less complex, and significantly more economical.

Key facts

- Alzheimer's pre-screening in routine testing
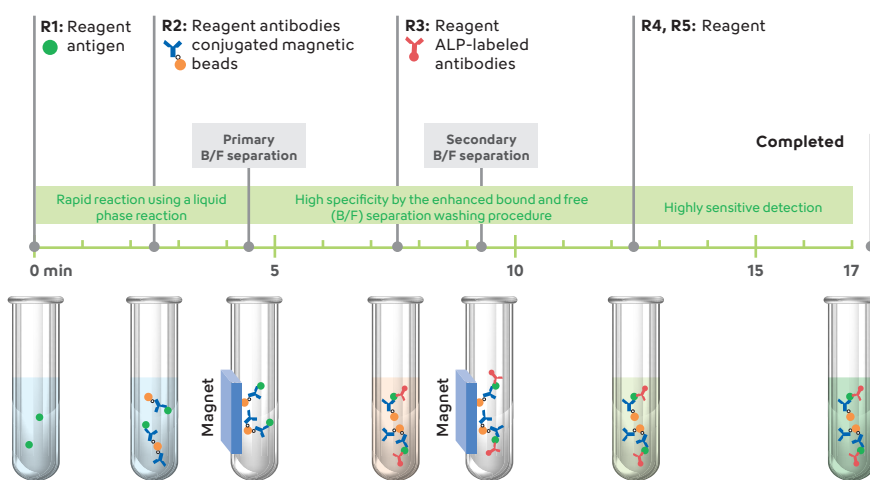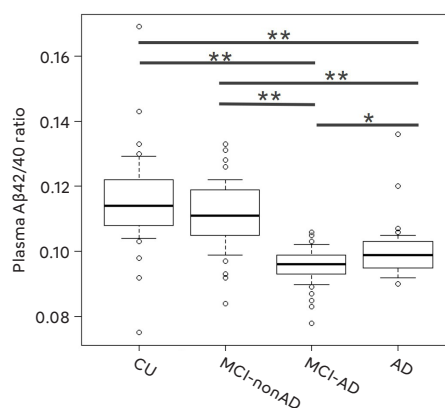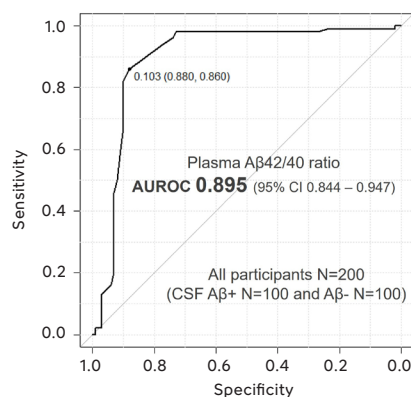- Non-invasive blood sampling
- CE-IVD certification

R1: Reagent antigen
R2: Reagent antibodies conjugated magnetic beads
R3: Reagent ALP-labeled antibodies
R4, R5: Reagent

Primary B/F separation
Secondary B/F separation
Completed

Rapid reaction using a liquid phase reaction
High specificity by the enhanced bound and free (B/F) separation washing procedure
Highly sensitive detection

0 min 5 10 15 17

Magnet
Magnet

Fig. 1 Principle of HISCL platform

High predictive accuracy for amyloid pathology

0.103 (0.880, 0.860)

Plasma Aβ42/40 ratio
AUROC 0.895 (95% CI 0.844 – 0.947)

All participants N=200
(CSF Aβ+ N=100 and Aβ- N=100)

Sensitivity
Specificity

Plasma Aβ42/40 ratio

CU MCI-nonAD MCI-AD AD

** ** ** ** *

The β-Amyloid 42/40 ratio measured from plasma samples using the Automated Immunoassay System HISCL shows an impressive accuracy (AUC 0.895) for predicting Aβ pathology.

Reference: Y Sasaki *et al.* [HJS1] (2024): Performance of plasma Aβ42/40 ratio to predict Aβ pathology status defined by CSF testing in SPIN cohort, Poster ADPD.

Discover more on our website
www.sysmex-europe.com/hiscl