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BIOMARKERS

POSTER PRESENTATIONS

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Developing topics

International initiative for harmonization of cerebrospinal fluid diagnostic comments in Alzheimer's disease

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Abstract

Background: The quantification of cerebrospinal fluid (CSF) biomarkers (Abeta peptides [Ab_{1-40} and Ab_{1-42}], tau protein and its phosphorylated form phospho-tau) is progressively implemented in laboratories as an aid for the multidisciplinary diagnosis of Alzheimer disease (AD), *DeKosky ST, Alz dementia, 2011, PMID: 21322828* . However, no consensus has been defined among the different laboratories involved to adapt the conclusions/comments to the level of quantified CSF biomarkers. As a result, although the analytical methods for such quantification may be similar across the laboratories involved in this clinical task, the conclusions transmitted to the physician in charge (neurologist or psychiatrist) may be quite different. Harmonization of this report is

thus necessary so patients' care and research stratification can be similar wherever the analysis is performed.

Method: A total of 34 laboratories (involved in CSF biomarkers measurement) across the world accepted to be part of our project of diagnostic's comments harmonization (represented countries: Austria, Belgium, Canada, France, Germany, Italy, Netherland, Poland, Spain, Sweden, United Kingdom, USA). As a first step, we defined the 9 most typical biochemical profiles, according to the level of CSF biomarkers and their combination. For each profile, each laboratory was asked to provide us with the comments/conclusions given in routine clinical practice. We then collected and pooled all the comments in a common file, so that the laboratories could, as a second step, choose and order three of these comments (for each biochemical profile defined), according to their reliability in clinical practice.

Result: We are currently analysing the second step-answers of the laboratories, in order to define a consensual pattern of comments and conclusions that could be implemented in all the laboratories involved in the biochemical diagnosis of AD. Obtained data will be presented.

Conclusion: The discrepancies of the comments for AD biochemical diagnosis across laboratories worldwide can be confusing and it is of strong importance to harmonize them (according to the level of quantified biomarkers and other information likely available such as the age, APOE genotype...). Our initiative will likely provide such harmonized pattern of comments/conclusions, thus ensuring equal care of patients across the different diagnostic centres.