



New Diagnostic Pathways Could Improve Dementia Diagnosis, According to Consensus Statements to Be Presented at the American Academy of Neurology Annual Meeting

April 15, 2016

Quest Diagnostics and UCSF will also present novel research on improving the quality and reducing the costs of dementia care

MADISON, N.J., April 15, 2016 /PRNewswire/ -- A tiered diagnostic approach that incorporates clinical, imaging and laboratory data may help physicians more efficiently screen for neurodegenerative disorders such as dementia, according to the consensus of a multi-disciplinary panel of experts. The consensus statement is among eight presentations developed with the participation of medical experts from Quest Diagnostics (NYSE: DGX) and its Athena Diagnostics business and academic collaborators scheduled for presentation at the 68th Annual Meeting of the American Academy of Neurology (AAN), to be held April 15-21, 2016 in Vancouver, BC, Canada.



Experts from the University of California, San Francisco (UCSF)'s Memory and Aging Center, one of the world's leading dementia research and clinical centers, collaborated with the Quest and Athena neurology teams on several of the AAN-scheduled presentations. The research is the outgrowth of a collaboration Quest and UCSF formed in January 2014 to advance the development of precision medicine diagnostics for neurology, cancer and other complex disorders.

"The goal of the Quest-UCSF precision medicine alliance is to develop and implement solutions which improve care and costs of care," said Jay G. Wohlgemuth, senior vice president and chief medical officer, Quest Diagnostics. "Our collaboration in dementia has moved us forward in creating solutions to guide physicians in evaluating and managing individuals with memory loss or dementia. These solutions, which combine all necessary clinical data on the patient with evidence and expert consensus, have the potential to improve the quality and efficiency of screening for dementia and other neurodegenerative disorders."

In March 2015, Quest Diagnostics and UCSF convened a panel of 34 experts in neurology, geriatrics, psychiatry and other specialties to develop better clinical pathways for screening and diagnosing patients at risk for early-stage neurodegenerative diseases as well as rapidly progressive dementias. These disorders, which can present with similar symptoms, are often first observed by primary care physicians, who may lack the specialized training to identify or differentiate some disease types. The panel discussions resulted in two consensus statements, both of which will be presented at the AAN conference.

"There is critical need for improved screening and diagnosis of neurodegenerative diseases. As the population ages, the prevalence of these diseases will grow and primary care physicians will be on the front lines of patient screening," said UCSF project lead Katherine P. Rankin, Ph.D., a professor in the Department of Neurology, UCSF. "This consensus-based approach addresses the pressing need for standardized, best-practice based guidelines to help physicians make well informed decisions relating to screening, diagnosis and referral to a specialist."

"More than 5.4 million Americans have dementia such as Alzheimer's disease, and this number is projected to almost triple by 2050. Despite numerous medical and scientific innovations to aid diagnosis, we lack a standardized pathway to help clinicians, particularly in primary care, to evaluate and diagnose these diseases," said panel participant Joseph J. Higgins, M.D., F.A.A.N., medical director of neurology, Quest Diagnostics, and laboratory director, Athena Diagnostics. "A consensus-based approach integrates best practices in clinical management with the most advanced diagnostic technology and genomic science with the goal to simplify and improve care quality."

A synopsis of the company's AAN presentations follows below:

Title: Personalized Neurogenomic Medicine

Date and Time: April 20, 1:00 PM – 2:00 PM (Platform Presentation by Joseph J. Higgins, M.D., F.A.A.N., Quest Diagnostics)

Neurogenomic medicine is at the forefront of the National Institutes of Health's Precision Medicine Initiative because of the major public health impact of childhood developmental disorders and adult neurodegenerative diseases, such as dementia. Since 80% of the approximately 19,000 genes in the human genome are expressed in the nervous system, clinical neurologists will be increasingly vital to efficacious care for patients with these disorders. Dr. Higgins will discuss "integrative diagnostics," a new model of disease diagnosis that combines laboratory and imaging test results with clinical data to potentially improve diagnosis and aid treatment.

Title: [Development of an Expert Consensus Approach to Screening, Assessment, and Diagnosis of Patients at Risk for Neurodegenerative Disease](#)

Date and Time: April 16, 7:45 AM – 8:00 AM **Abstract Number:** S1.006 (Oral Presentation by Katherine Rankin, PhD, UCSF)

Primary care physicians may lack the skill to identify mild cognitive impairments (MCI) or know when to refer the patient to a specialist. A panel of more than 30 experts in neurology, psychiatry, primary care, geriatrics and other fields developed a common approach to improve care quality and efficient diagnosis. The tiered approach begins with questions physicians can ask patients over age 65 years during a wellness visit; the approach may culminate in advanced neuroimaging and laboratory diagnostics by a specialist.

Title: [What Is the Current Value Equation for Dementia Diagnosis and Management: Variation in Costs Across Practice Types](#)

Date and Time: April 16, 8:00 AM – 8:15 AM **Abstract Number:** S1.007 (Oral Presentation by Leslie Wilson, PhD, UCSF)

A survey of physicians in three different practice types suggests diagnostic and first year follow-up costs for primary care practitioners and their personnel for physicians in accountable care organizations (ACO)/independent practice associations (IPA) were similar to those costs in neurology practices but substantially less than in medical home care. Total diagnosis and care costs though were almost four times higher in neurology practices and two times higher in medical home care, than when delivered by primary care physicians in an ACO/IPA practice.

Title: [Frequency of FTLD Mutations in a Commercial Laboratory Versus a Specialty Clinic](#)

Date and Time: April 19, 8:30 AM - 7:00 PM **Abstract Number:** P4.036

Experts from UCSF and Athena Diagnostics determined that the frequencies and types of certain pathogenic variants for frontotemporal lobar degeneration (FTLD) differed by specialty clinic and commercial clinical laboratory, underscoring the value of genetic screening and academic-industry collaborations in FTLD.

Title: [Development of a Diagnostic Decision Tree for Rapidly Progressive Dementia \(RPDs\)](#)

Date and Time: April 20, 8:30 AM - 7:00 PM **Abstract Number:** P5.182

Diagnostic delay of RPDs can lead to increased morbidity and mortality. A panel of nearly a dozen experts convened by Quest and UCSF developed a diagnostic decision tree incorporating clinical data, MRI protocol, laboratory and other evaluations to facilitate diagnosis.

Title: [The Frequency of Damaging Genetic Variants in A Cohort of Over 1500 Patients with Early Onset Familial Alzheimer's Disease](#)

Date and Time: April 20, 8:30 AM - 7:00 PM **Abstract Number:** P5.163

Quest experts found that damaging alterations in the PSEN1 gene were the most common contributor to early onset familial Alzheimer's disease (EOFAD), consistent with other studies.

Title: [Analysis of 141 Epilepsy Related Genes Using Next Generation Sequencing in 390 Patients](#)

Date and Time: April 20, 8:30 AM – 7:00 PM **Abstract Number:** P5.154

Molecular diagnosis of epilepsy can help assess inherited risk and guide antiepileptic therapies. Phenotype-driven multigene panels for epilepsy identified pathogenic variants in 10% of cases, underscoring the "need for pre- and post-test genetic counseling for patients and their families."

Title: [Analytical Performance of a Genome-Phenome Analyzer for Use in a Clinical Laboratory](#)

Date and Time: April 20, 2016, 8:30 AM – 7:00 PM **Abstract Number:** P5.133

A software program that evaluates genomic variants based on scores of pathogenicity and clinical data had high sensitivity (93%) for ranking diagnostically pertinent genes in a commercial laboratory setting.

About Athena Diagnostics

Athena Diagnostics, a business of Quest Diagnostics, is a leader in diagnostic testing for neurological diseases and offers innovative tests for Alzheimer's disease, muscular dystrophy and other neuromuscular and developmental disorders. Athena is dedicated to providing neurologists and other physicians and specialists with insights that can improve patient health. www.AthenaDiagnostics.com.

About Quest Diagnostics

Quest Diagnostics empowers people to take action to improve health outcomes. Derived from the world's largest database of clinical lab results, our diagnostic insights reveal new avenues to identify and treat disease, inspire healthy behaviors and improve health care management. Quest annually serves one in three adult Americans and half the physicians and hospitals in the United States, and our 44,000 employees understand that, in the right hands and with the right context, our diagnostic insights can inspire actions that transform lives. www.QuestDiagnostics.com.

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